

## **APPENDIX IV**

### **CULTURAL AND PALEONTOLOGICAL ASSESSMENT**

**CULTURAL RESOURCES RECORDS  
SEARCH AND SURVEY REPORT AND  
PALEONTOLOGICAL ASSESSMENT FOR  
A PORTION OF THE CACTUS ROAD SITE,  
OTAY MESA AREA,  
SAN DIEGO COUNTY, CALIFORNIA**

***By:***

**Richard S. Shepard, M.A., RPA  
Field Director and Report Author**

**Roger D. Mason, Ph.D., RPA  
Principal Investigator**

**Hugh M. Wagner, Ph.D.  
Paleontology Collection Manager**

***Prepared For:***

**ENV AMERICA  
16 Technology Drive, Suite 154  
Irvine, California 92618**

***Prepared By:***

**Chambers Group, Inc.  
17671 Cowan Avenue, Suite 100  
Irvine, California 92614**

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## INTRODUCTION

A cultural resources records search and field survey and paleontological assessment were conducted for an approximately 12-acre project area within the Cactus Road Site as part of closure procedures for a landfill facility. The project area is located 15 miles southeast of central San Diego in the Otay Mesa area (Figure 1). Closure procedures for the landfill include excavation of designated portions of remaining natural surfaces within the property to further cover the existing area of waste fill. The records search and survey were performed for ENV America of Irvine.

## LOCATION AND SETTING

As shown on the U.S. Geological Survey 7.5' *Otay Mesa* Topographic Quadrangle (1955; photorevised 1971; photoinspected 1975), the project area is located in Township 18 South, Range 1 West, and Section 33 of the San Bernardino Base and Meridian (Figure 2). Approximately 37 acres in size, the overall Cactus Road Site is block-shaped and encompasses nearly all of the southeastern quarter of the northwestern quarter of Section 33. More specifically, the project area is located on the westerly side of Cactus Road, between Otay Mesa Road and Airway Road, about 1.25 miles north of the United States - Mexico International Border.

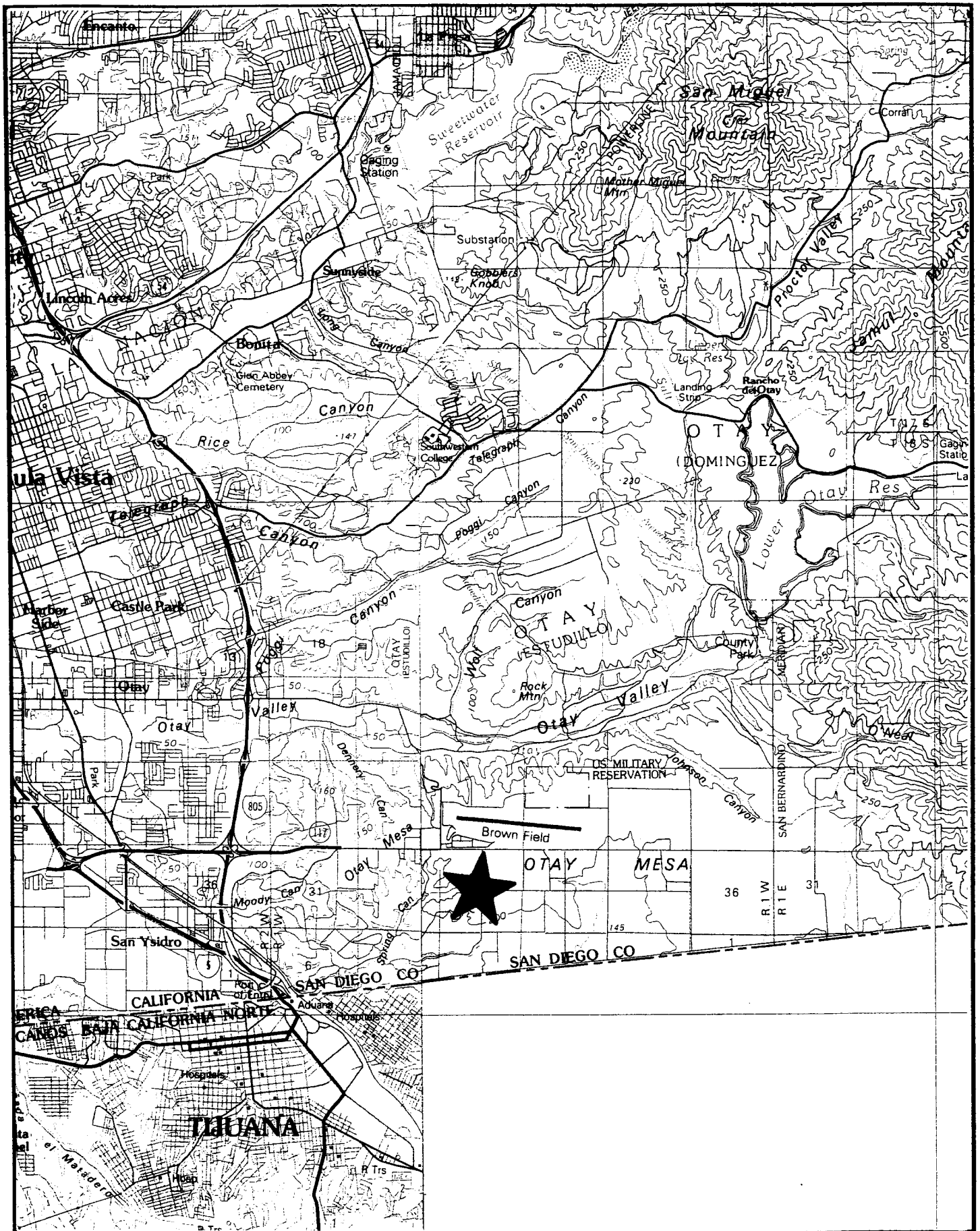
The Cactus Road Site consists of three adjoining properties, including the larger Sesi parcel (formerly designated as the Tripp Salvage Landfill) along with the smaller Barnhart and Dantzler parcels (Figure 3). The Sesi parcel consists of 33.25 acres, while the Barnhart and Dantzler parcels consist of 3.16 and 0.91 acres, respectively. The three properties are collectively referred to as the Cactus Road Site. The area of existing waste fill is located in the northeastern portion of the overall site (Figure 3).

The Cactus Road Site is situated at the head of Spring Canyon, a southwesterly-draining tributary of the Tijuana River. This portion of the canyon has been filled with waste material. The surrounding topography reflects the essentially flat nature of Otay Mesa. Uplifted marine and river terraces are common landscape features in this region. Massive flooding of the Tijuana River in 1891 inundated low-lying areas and likely resulted in deposits of fluvial silts and sediments in these areas (Harden 1998:422). Native vegetation on the mesa consists of sparsely distributed coastal sage scrub, while Spring Canyon contains denser phreatophyte (deep-rooted) riparian growth.

## PREHISTORIC BACKGROUND

San Diego County prehistory stretches back to the end of the Pleistocene epoch (or Ice Age) about 10,000 years ago (BP), and continues through the Holocene (current epoch) until historic times, or about 200 BP. This chronology is generally divided into two periods, Early and Late. The Early Period encompasses a long span of time, from about 10,000 to 1,300 BP. The Late Period lasted from 1,300 to about 200 BP. The cultural sequence is described in terms of archaeological cultures or *complexes* of distinct artifact assemblages from certain periods in prehistory.

The earliest complex, *San Dieguito*, was originally thought to represent Early Holocene (7,000 to 10,000 BP) big game hunters who moved to the San Diego County coastal area from the Great Basin when warmer, drier conditions at the end of the Pleistocene resulted in desiccation of interior pluvial lakes (Warren 1967). Because large projectile points were found at a *San Dieguito* site known as the Harris site (SDI-149), it was presumed that big game hunting continued on the coast into the Holocene. However, coastal sites dating to this period, such as SDI-10965 and SDI-9649, indicate that a wide range of plant foods, smaller terrestrial mammals, fish, and shellfish were being exploited. Low population densities made for relatively little competition for resources. Small groups probably moved freely throughout the coastal area and Peninsular Ranges to locales where the best resources were available. SDI-9649 may have served as an Early Holocene residential base for several seasons each year.



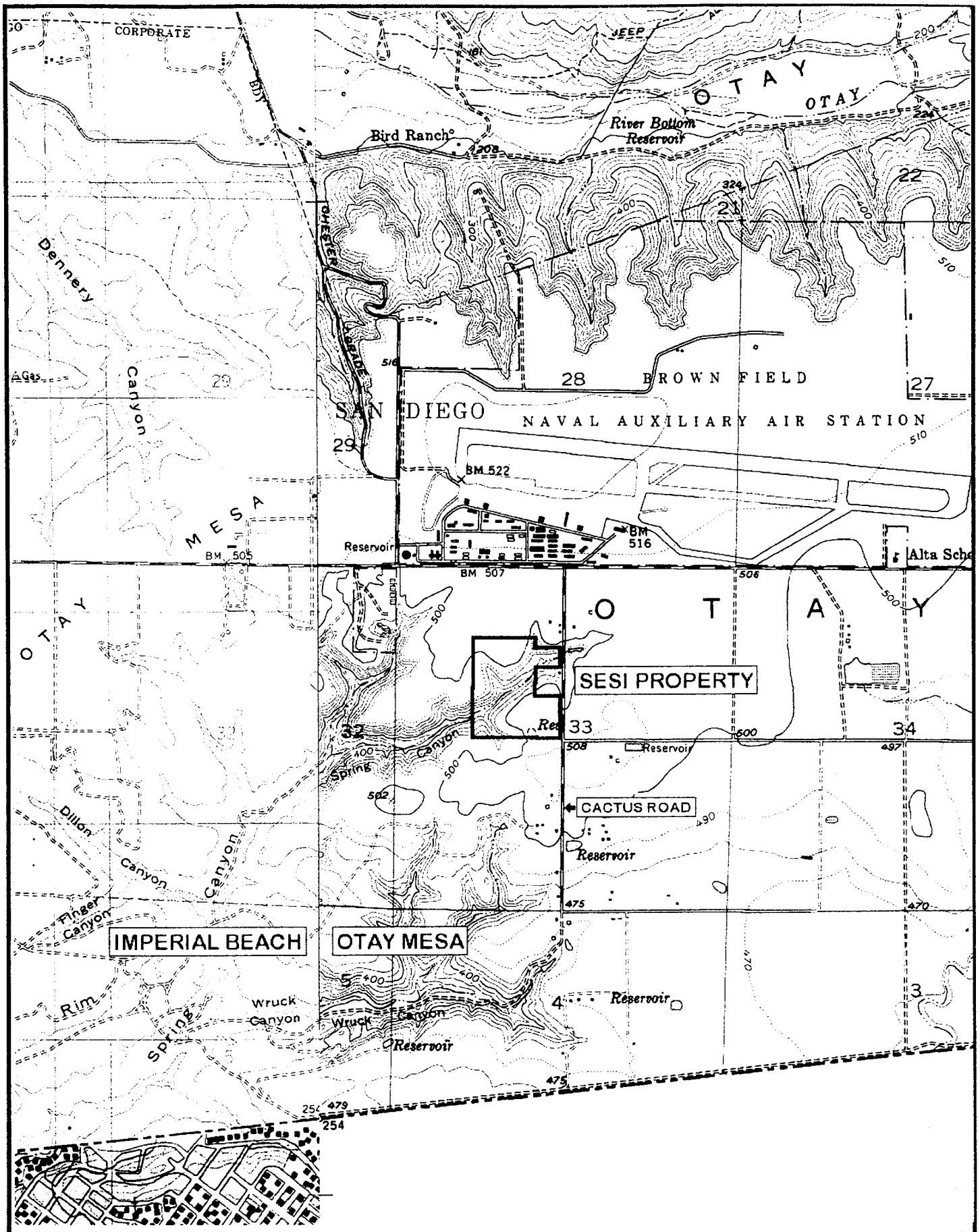
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MAP SCALE = 1:100,000

PROJECT VICINITY MAP

Figure 1

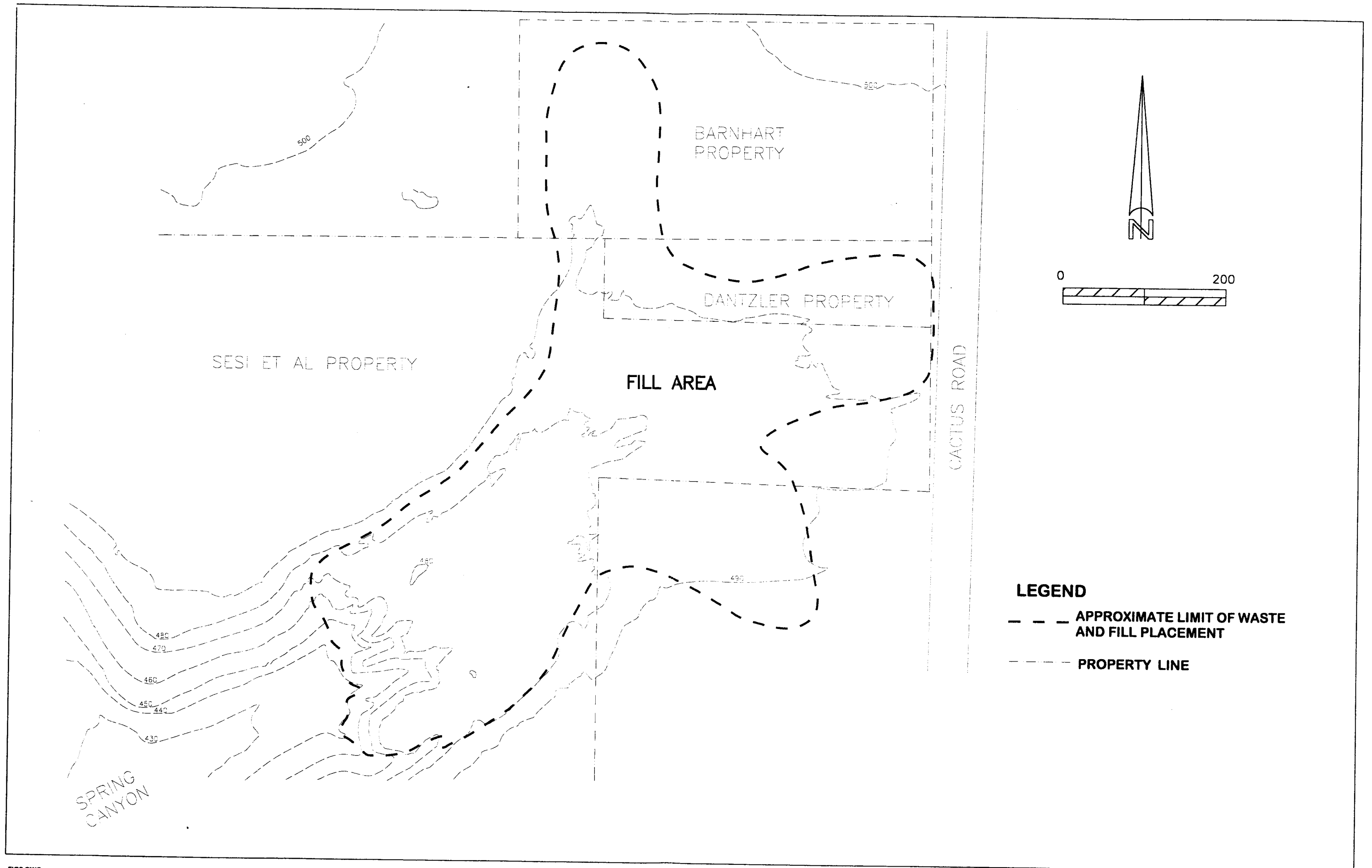
USGS 30'X 60' QUADRANGLES SAN DIEGO AND IMPERIAL BEACH



MAP SCALE = 1 INCH = 2000FT

PROJECT AREA LOCATION MAP  
Figure 2

Source: USGS Imperial Beach and Otay Mesa 7.5' quads





The *La Jolla Complex* (Rogers 1939; Harding 1951) represents the material culture of people who occupied the San Diego County coastal region between 8,000 and about 3,000 BP. Most *La Jolla* sites are located around lagoons which began filling with sea water near the beginning of this period, as sea levels rose with melting ice remaining from the Pleistocene. Shellfish from these lagoons served as an important food source. *La Jolla* sites contain fire-affected rock features (probably hearths). Common tools include chipped core-cobble implements and Elko-Eared projectile points, along with abundant manos and metates for grinding seeds and other plant foods.

Few sites in interior San Diego County date to the period from 3,000 to 1,300 BP. During this time, coastal lagoons began to fill with silt, reducing or eliminating important shellfish yields. Little is known about settlement and subsistence during this period of San Diego County prehistory, and this apparent reduction of human activity has been regarded as a transition between the occupations of earlier, more mobile groups and later, more sedentary peoples (Moratto 1984).

The Late Period (1,300 to 200 BP) is characterized by larger populations, a more sedentary settlement system, and more intensive use of available resources. The large villages occupied almost year-round seen by the Spanish in AD 1769 developed during this period. In southern interior San Diego County, the Late Period is marked archaeologically by the *Cuyamaca Complex*, representing cultural materials of the protohistoric Tipai or Southern Diegueño (see Waterman 1910; Davis 1919; Spier 1923; Kroeber 1925; Drucker 1937, 1941; Luomala 1987; see also various articles by DuBois, e.g., 1907). Recently, Tipai people have called themselves *Kumeyaay*, referring to their homelands in southern San Diego County. The archaeology of the Yuman-speaking Southern Diegueño shows a strong continuity with earlier *La Jolla* materials, along with the advent of steatite and ceramic artifacts, including vessels for cremations. Bedrock mortars indicate that acorns emerged as an important food source during this time. Markedly labor intensive to prepare, acorns were added to the diet relatively late in prehistory when increasing numbers of people required additional sources of calories, as well as a durable food which could be stored. Obsidian was also more commonly used, and smaller projectile points indicate use of the bow and arrow, rather than the earlier *atlatl* or throwing dart.

## HISTORIC BACKGROUND

In 1769, the Gaspar de Portolá land expedition arrived in the San Diego area from New Spain (Mexico), and Mission San Diego de Alcalá was founded as the first Spanish mission in *Alta California*. Although Spanish maritime explorers had visited the southern California coastline much earlier, the establishment of Mission San Diego represented the first Spanish settlement in the *Alta California* territory, inaugurating the Spanish Period in California (1769–1822).

The Spanish practice of granting large tracts of ranchlands was continued during the Mexican Period (1822–1848) after Mexico's independence from Spain in 1822. The nearest of these to the project area was the *Otay* grant, extending to approximately one mile north of the project area. The 6,658-acre *Otay* grant was originally conferred to Magdalena Estudillo in 1829, with the neighboring *Janal* grant of 4,437 acres given to her brother Jose Antonio Estudillo the same year (Avina 1932:39; Cowan 1956:55; Rush 1965:8; Pourade 1963:63). *Otay* was expanded and re-confirmed to Magdalena Estudillo in 1846.

The United States took control of the California territory after the Mexican–American War of 1846–1848 and the Treaty of Guadalupe Hidalgo, marking the beginning of the American Period (1848–Present). With the coming of statehood for California in 1850, San Diego County was established as one of the original counties into which the new state was divided (Coy 1973:220–224; Marschner 2000:24–41). At that time, the area designated as San Diego County included nearly all of present-day San Diego, Imperial, Riverside, and San Bernardino Counties, as well as a small portion of present-day Inyo County.

The discovery of gold near Julian in 1869 drew additional settlers to the region (Ellsberg 1972). The National City and Otay Railroad began construction of a line in the area in 1887 (Dumke 1944:270). Large-scale efforts to irrigate Otay Mesa began in 1888, when the Otay Water Company was formed, and the area has remained largely agricultural through recent times (Dumke 1944: 239; McPhail 1979:106).

## **METHODS**

### **Cultural Resources**

A cultural resources records search was obtained from staff at the South Coastal Information Center at San Diego State University (Appendix A). The cultural resources records search provided data on previous cultural resources investigations conducted within a one-mile radius of the Cactus Road Site, as well as on all cultural resources documented within one mile of the project area. Results of the records search are detailed below.

A systematic archaeological field survey of designated portions of the Cactus Road Site was performed on June 29, 1999 by Richard Shepard, M.A., Senior Archaeologist of Chambers Group, Inc. (Appendix B). The foot survey covered surfaces within the property that are currently planned for grading or borrow excavations. These surfaces included the level area in the northwestern part of the property, slopes adjacent to the western waste fill limit, the canyon bottom between those slopes, and an area near Cactus Road immediately south of the entrance gate (Figure 4). The survey was conducted using parallel north-south transects 15 meters wide in level terrain; in sloping areas, similarly-spaced transects were oriented according to the topography. Ground visibility in these areas ranged from good (on slopes) to poor (in the canyon bottom); visibility in the flat area to the northwest was fair, due to moderately dense weeds and shrubs that have taken hold following discontinued agricultural activity.

### **Paleontological Resources**

In addition to the cultural resources records search, a search of paleontological collections and archives was conducted by Hugh Wagner, Ph.D., Collections Manager of the Department of Paleontology at the San Diego Natural History Museum (Appendix D). The paleontological search provided data on geological formations and known fossil localities within a one-mile radius of the Cactus Road Site.

The paleontological assessment of the Cactus Road Site was derived from the archival and collections data search and based on the locations and context of documented discoveries in the general area as well as the potential for fossil discoveries in the project area. A paleontological field investigation of the Cactus Road site has not been undertaken.

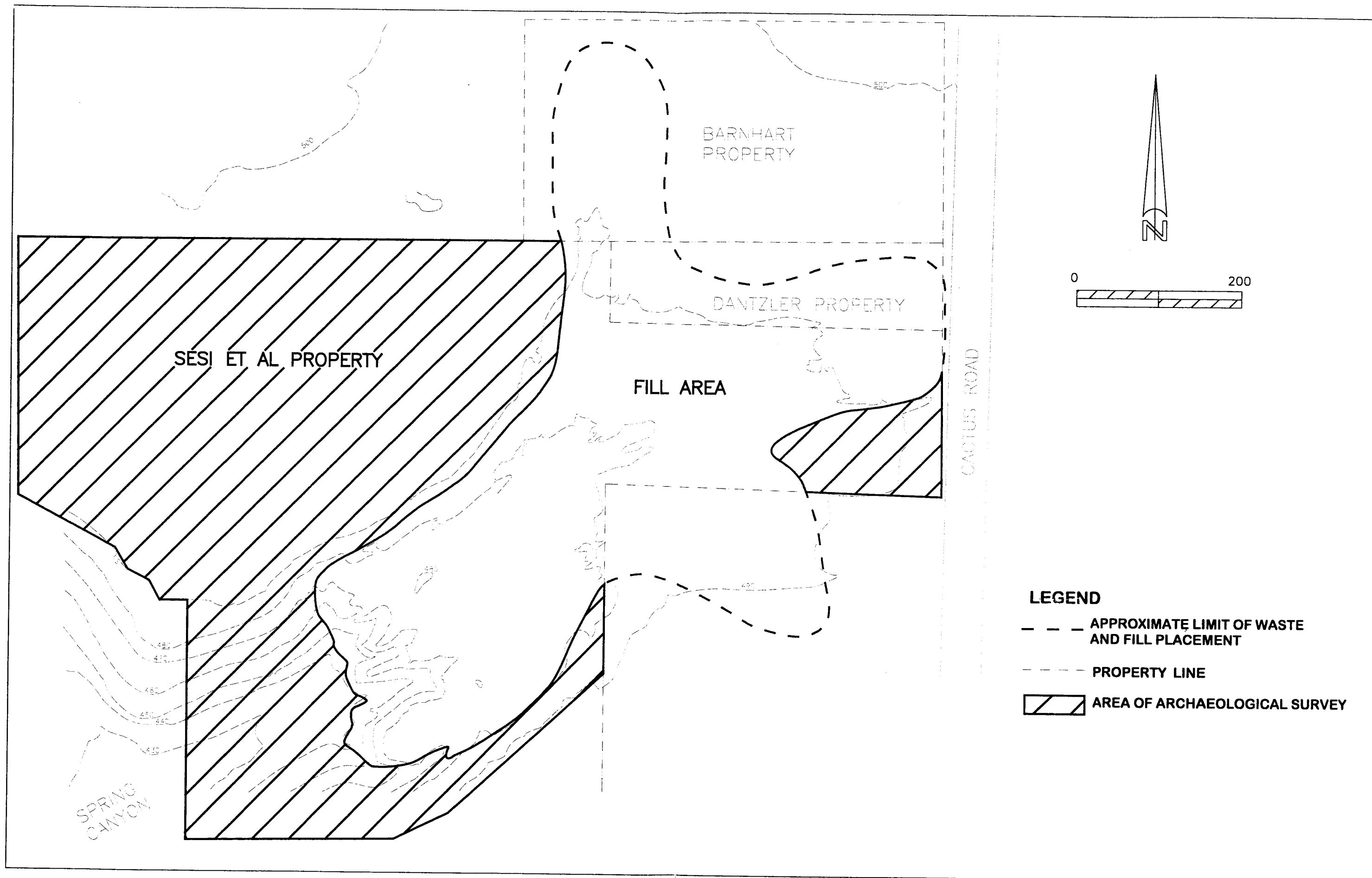
## **RESULTS**

### **Cultural Resources Records Search Results**

The records search completed by the South Coastal Information Center (SCIC) at San Diego State University reported that at least 14 archaeological investigations have been documented within one mile of the project area (see Appendix A). However, records of archaeological resources for this area suggest that more studies have taken place in the immediate vicinity of the project area than are currently on file at the SCIC.

The results of the records search showed that Spring Canyon and the general Otay Mesa area were heavily used during prehistory, with at least 21 prehistoric archaeological sites and six isolated prehistoric artifacts documented within one mile of the Cactus Road Site. The 21 prehistoric sites are summarized below in Table 1. Many of these resources are clustered around the Spring Canyon network of drainages. A particularly large site, CA-SDI-7208, is centered just east of Cactus Road. This site appears to encompass an extensive habitation deposit, CA-SDI-11,424, located immediately east of Cactus Road near the head of Spring Canyon (Kyle and Tift 1995).

A smaller prehistoric site, CA-SDI-11,423, has been recorded within the Cactus Road Site project area and is discussed in more detail below.



**Table 1**  
**Prehistoric Archaeological Sites Recorded Within 1 Mile of the Project Area**

SCIC Designation	First Recorded	Site Type	Site Description
CA-SDI-6941	03 / 06 / 79	Habitation/camp	Dense lithic deposit w/shell
CA-SDI-7208	08 / 31 / 79	Lithic scatter	Lithic deposit, dense in places
CA-SDI-10,185	12 / 02 / 83	Habitation/camp	Dense lithic deposit w/midden, hearths, and faunal remains
CA-SDI-10,186	12 / 08 / 83	Lithic scatter	Moderately dense lithic deposit
CA-SDI-10,187	12 / 08 / 83	Lithic scatter	Light density lithic deposit
CA-SDI-10,188	12 / 08 / 83	Habitation/camp	Dense lithic deposit w/shell, shell artifact
CA-SDI-10,189	12 / 05 / 83	Habitation/camp	Moderately dense lithic deposit w/shell
CA-SDI-10,190	12 / 06 / 83	Habitation/camp	Light density lithic deposit w/shell
CA-SDI-10,196	12 / 08 / 83	Habitation/camp	Light density lithic/shell deposit
CA-SDI-10,616	09 / 00 / 86	Lithic scatter	Light density lithic deposit
CA-SDI-10,618	09 / 00 / 86	Lithic scatter	Light density lithic deposit
CA-SDI-10,619	09 / 00 / 86	Lithic scatter	Moderately dense lithic deposit w/midden, shell, and ceramics
CA-SDI-10,621	09 / 00 / 86	Lithic scatter	Varying density lithic deposit, habitation area
CA-SDI-11,080	12 / 21 / 88	Lithic scatter	Light density lithic deposit
CA-SDI-11,423	01 / 07 / 89	Lithic scatter	Light density lithic deposit
CA-SDI-11,424	01 / 07 / 89	Habitation/camp	Dense lithic deposit w/midden, shell, tools
CA-SDI-11,680	06 / 20 / 90	Lithic scatter	Light density lithic deposit
CA-SDI-14,082	02 / 24 / 95	Lithic scatter	Light density lithic deposit
CA-SDI-14,092	03 / 25 / 95	Lithic scatter	Light density lithic deposit
CA-SDI-14,093	03 / 25 / 95	Lithic scatter	Light density lithic deposit
CA-SDI-14,094	03 / 25 / 95	Lithic scatter	Light density lithic deposit

CA-SDI-11,423 was first recorded in 1989 as a low density scatter of prehistoric lithic artifacts, including 10 tertiary flakes produced from black porphyritic andesite and green Santiago Peak metavolcanic materials. The recorder noted that CA-SDI-11,423 had undergone extensive agricultural disturbance and that most of the artifacts were observed in a dirt road adjacent to planted fields. The recorder also noted that the site had been discovered through archaeological survey methods and that no subsurface testing was conducted. The location of the site was given as "1400 feet south of Otay Mesa Road (Hwy 117) and 900 feet west of Cactus Road on the mesa edge overlooking Spring Canyon to the south" (Cook 1989), corresponding to the northwestern portion of the Sesi parcel within the Cactus Road Site project area.

The results of the records search also showed that four historic sites have been recorded within one mile of the Cactus Road Site project area. None of these are located within the project area itself. These historic sites are summarized below in Table 2.

**Table 2**  
**Historic Site Locations Recorded Within 1 Mile of the Project Area**

SCIC Designation	First Recorded	Site Type	Site Description
P-37-015980	09/26/97	Historic location	Ca. 1900 farmstead (unnamed) site
P-37-015982	09/26/97	Historic location	Ca. 1900 Schroeder/Geyser/Stark farmstead site
P-37-015987	00/00/96	Historic location	Ca. 1913 Dallet farmstead site
P-37-015988	00/00/96	Historic location	Ca. 1889 St. John's Lutheran Church and cemetery site

## **Cultural Resources Field Survey Results**

Archaeological site CA-SDI-11,423 was relocated in the location initially recorded by Cook (1989). The site is situated on the level mesa area in the northwestern portion of the Sesi sub-parcel within the overall Cactus Road Site (Figure 5). The 10 tertiary flakes observed during the initial documentation of the site were not relocated, probably due to agricultural disturbances, as noted by Cook (1989). However, a low-density assemblage of other prehistoric artifacts was observed during the recent survey by Chambers Group. These included three large primary flake tools with modified and/or utilized edges, one large secondary flake tool with utilized edge, and a non-utilized primary flake (all of green metavolcanic material). Also observed was a small multidirectional core made from a primary flake of dark metavolcanic material. Existing vegetation of moderate density may obscure other artifacts. The differences in the assemblage observed by Cook in 1989 and that by Chambers Group in 1999 are likely due to the effects of agricultural activity during the intervening ten years.

No additional archaeological or above-ground historic cultural resources were observed during the field survey by Chambers Group. A eucalyptus windrow is located near the northern boundary of the Cactus Road Site, stretching roughly 200 feet in a north-south orientation along the western edge of the Barnhart parcel and extending across the northern boundary of the Sesi parcel. Some eucalyptus windrows in the general area have been identified as contributing elements to historic farmsteads when a direct association between the trees and other elements of a specific farmstead (such as structures) is evident. For example, eucalyptus trees associated with additional elements of the historic Dallet farmstead (see Table 2) have been identified east of Cactus Road (Kyle and Phillips 1996). No such association, however, is evident for the eucalyptus windrow present within the Cactus Road Site, and no additional elements of a specific historic farmstead are apparent (structures in the immediate area are not of historic age). Furthermore, the trees themselves are not especially large and do not appear to be of historic age.

## **Paleontological Resources Records Search Results**

The Cactus Road Site project area is underlain by three geological rock units, as follows:

- Upper: **Lindavista Formation** (Pleistocene, 1.8 million to 10,000 years ago)
- Next: **San Diego Formation** (Pliocene, 5 million to 1.8 million years ago)
- Lower: **Otay Formation** (Oligocene, 39 million to 23.5 million years ago)

First and uppermost, the surface of Otay Mesa at this location is underlain by the Lindavista Formation, containing coarse conglomerates of Pleistocene age. Second, the San Diego Formation represents a marine deposit of Pliocene age. Third, the Otay Formation occurs as a thick sequence of Oligocene age. All three formations that underlie the project are known to produce terrestrial invertebrate and other fossil types, and all three are considered to be of high paleontological sensitivity. The San Diego and Otay Formations have a high probability of containing significant paleontological resources, while the Lindavista Formation has a somewhat lower probability. The nearest documented locations of fossil discoveries are more than one mile from the project area. Fossils in these locations occurred in the San Diego Formation and consisted of marine invertebrates and leaf impressions in sandstone and siltstone (see Appendix D).

## **RECOMMENDATIONS**

The location of archaeological site CA-SDI-11,423 corresponds in part to the proposed location of a borrow area to be excavated as part of closure procedures for the Cactus Road Site. Because the site will be impacted by the proposed excavations and landscaping activity, CA-SDI-11,423 should be tested to determine its eligibility for the California Register of Historic Resources (CRHR) as required by California Environmental Quality Act (CEQA) Guidelines Section 15064.5. Chambers Group recommends implementation of an archaeological test program by a qualified archaeologist that includes, at a



minimum, (1) a systematic surface collection, (2) a series of shovel test probes (STPs) to determine the horizontal and vertical boundaries of the deposit, and (3) a minimum of two 1- by 1-meter controlled excavation units to better assess the nature and composition of subsurface cultural deposits.

The archeological test program will determine whether the site is significant under CEQA. The significance of archaeological sites is weighed against their potential to answer specific research questions by yielding data important in prehistory or history. If the results of the test program show that the site is significant under CEQA, then further evaluation in accordance with the County of San Diego Resource Protection Ordinance (RPO) shall be conducted. If the site is shown to be significant under RPO criteria, then the resource must be preserved in consultation with the County of San Diego Staff Archaeologist. If the site is shown to be not significant under RPO, but is shown to be significant under CEQA, Chambers Group recommends avoidance of the site. If the site cannot be avoided because of engineering or other construction constraints, Chambers Group recommends that a qualified archaeologist be retained to perform data recovery mitigation prior to initiation of construction activities and to perform monitoring of construction-related activities in the area of CA-SDI-11,423 during the grading and cutting phase of the project. Chambers Group also recommends that a qualified archaeological monitor be present when any areas of undisturbed native soils adjacent to Cactus Road are graded, due to the proximity of archaeological site SDI-11,424 immediately east of the project area.

In addition, Chambers Group recommends that a qualified paleontologist be retained to monitor construction activities within the sensitive geological formations as discussed.

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## **APPENDIX IV**

### **Appendix A: Archeological Records Search**

## CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM SITE FILES RECORD SEARCH

**Source of Request:** Chambers Group - Brant Brechbiel/Roger Mason

**Date of Request:** June 22, 1999

**Date Request Received:** June 23, 1999(fed-x)

**Project Identification:** Project #8211

- ( ) The South Coastal Information Center historical files show NO recorded historic or prehistoric site location(s) within the project boundaries nor within a one mile radius of the project area.
- (X) The South Coastal Information Center historical files show recorded prehistoric site location(s) within the project boundaries and/or within a one mile radius of the project area. Historic property locations are shown only if site location(s) are within the project boundaries.

Project maps have been reviewed. The bibliographic material for reports within your project boundaries and/or within a one mile radius of the project area have been included.

The historic maps on file at the South Coastal Information Center have been reviewed with copies included. If there are historic properties within your project boundaries, the information from the National Register of Historic Properties, California State Landmarks, California Points of Historic Interest, and other historic property lists has been included.

<b>Archaeological Site Location(s) check:</b>	PAF	<b>Date:</b> June 23, 1999
<b>Historical Site Location(s) check:</b>	PAF	<b>Date:</b> June 23, 1999
<b>Bibliographic Materials check:</b>	PAF	<b>Date:</b> June 23, 1999
<b>Historic Map(s) check:</b>	PAF	<b>Date:</b> June 23, 1999
<b>Historical Resources check:</b>	PAF	<b>Date:</b> June 23, 1999

## **APPENDIX IV**

### **Appendix B: Resumes**

**RICHARD S. SHEPARD  
SENIOR ARCHAEOLOGIST**

Mr. Shepard specializes in cultural resource management, including both prehistoric and historic archaeology. During 7 years of professional experience, he has served as a Field Archaeologist, Field Director, or Project Manager for cultural resource management projects in northern and southern California. He is skilled in a wide range of field, lab, and administrative tasks fundamental to cultural resource management and has authored more than four dozen cultural resources management reports. While his research interests have been focused on Far Western Native American culture and prehistoric rock art, his training also includes archival research in evaluating historic resources and properties.

**EDUCATION**

M.A., Archaeology, University of California, Los Angeles, Institute of Archaeology, 1997  
Pre-Graduate Studies (Anthropology), California State University, Long Beach, 1993-94  
Extension Studies (Archaeology), University of California, Los Angeles, 1991-93  
B.A., Journalism, California State University, Fresno, 1979

**REGISTRATIONS, CERTIFICATIONS, AND AFFILIATIONS**

- Register of Professional Archaeologists (ROPA, formerly SOPA), 2001
- Society for American Archaeology (SAA)
- Society for California Archaeology (SCA)
- Society for Historical Archaeology (SHA)
- UCLA Rock Art Archive, Institute of Archaeology
- American Rock Art Research Association
- Pacific Coast Archaeological Society
- Nature Conservancy of California
- Archaeological Conservancy

**PROFESSIONAL EXPERIENCE**

- **Proctor Valley – Otay Land Company, LLC.** Co-Field Director for Phase I archaeological survey of a 950-acre residential development property near Jamul, inland San Diego County, California (2001). Supervised 2-person survey team in conjunction with phased fieldwork under other field directors, but bulk of responsibilities on this project involved preparation of final survey report and 29 sets of Department of Parks and Recreation (DPR) 523 site record forms using field data collected largely by others. Worked closely with AutoCad computer graphics engineers in producing site location and archaeological plan maps for 16 prehistoric sites, one historic site, and 12 prehistoric isolated artifacts. Work performed under supervision of Roger D. Mason, Ph.D., RPA, Principal Investigator.
- **Pacific Highlands Ranch - Pardee Construction Company.** Field Director for Phase II test excavations at five archaeological sites in a large development property along a near-coastal valley, Del Mar area, San Diego County, California (2000). Supervised 7-person field crew in point-provenience surface collections, systematic shovel test probes, and controlled excavation units at three Middle Period *La Jolla* sites (CA-SDI-7202, CA-SDI-7204, CA-SDI-13095), an historic structural site (CA-SDI-14001H), and an adobe ruin (ca. 1890) with a minor prehistoric component (CA-SDI-5197/H). Co-Field Director for Phase III data recovery excavations at two additional Middle Period *La Jolla* sites in the same project area (CA-SDI-6912B and CA-SDI-13096). All material remaining in dry screens was water-screened onsite through ¼-inch mesh before sorting in the lab. Work performed under supervision of Roger D. Mason, Ph.D., RPA, Principal Investigator. Final report in preparation.



- **Montecito Ranch – Citation Homes.** Field Director for Phase I archaeological survey of a residential development property near Corona, western Riverside County, California, and subsequent Phase II test excavations (2000). Supervised 2-person survey team for the overall 125-acre property. Supervised 5-person field crew in point-provenience surface collections, systematic shovel test probes, and controlled excavation units at a large Middle Period *Pauma Complex* site (CA-RIV-6467). All material remaining in dry screens was water-screened onsite through ¼-inch mesh before sorting in the lab. Prepared final Phase I survey report, final Phase II test report, and DPR 523 site record forms. Work performed under supervision of Roger D. Mason, Ph.D., RPA, Principal Investigator.
- **Santa Barbara Coastal Development Permit – Level (3) Network Communications.** Conducted primary archival research required by the City of Santa Barbara, California, for development of a fiber-optic cable installation corridor (2000). Historic records were obtained from city and county agencies (Hall of Records, Department of Public Works, and Community Development Department), as well as archives at University of California, Santa Barbara (Maps & Imagery, Special Collections, and Central Coastal Archaeological Information Center) and Santa Barbara Historical Society (Gledhill Library). Prepared final Phase I Archaeological Resource Report. City granted Coastal Development Permit to client. Work performed under supervision of Roger D. Mason, Ph.D., RPA, Principal Investigator.
- **Tehachapi Workaround – Level (3) Network Communications.** Field Director for Phase III data recovery excavations at three Late Period prehistoric archaeological sites within a fiber-optic cable installation corridor in the Tehachapi Mountains east of Bakersfield, Kern County, California (2000). Supervised 5-person field crew in controlled excavation units at specific points within CA-KER-1558, CA-KER-3367, CA-KER-3370 where the angle of subsurface avoidance bores required realignment at the surface. All material remaining in dry screens was water-screened in a field lab through ¼-inch mesh before sorting. Work performed under supervision of Roger D. Mason, Ph.D., RPA, Principal Investigator. Final data recovery report in preparation.
- **Highway 1 Workaround – Level (3) Network Communications.** Field Director for Phase I archaeological field survey of an 8-mile linear fiber-optic cable installation corridor along the State Route 1 in a near-coastal stream valley near Lompoc, Santa Barbara County, California (2000). Supervised survey crew including an archaeologist and two Native American (Owl Clan Chumash) consultants. Identified one previously unrecorded prehistoric site and three isolated artifacts, along with re-mapping of a large prehistoric site first recorded in 1936 (CA-SBA-244). Worked with fiber-optic engineers in accurate mapping of sites. Prepared final survey report and DPR 523 site record forms. Work performed under supervision of Roger D. Mason, Ph.D., RPA, Principal Investigator.
- **CalMat/Pala Operations Lease Property - Vulcan Materials.** Field Director for Phase I archaeological survey of 500-acre expansion area associated with an open-pit aggregate surface mine in the San Luis Rey River valley near Pala, northern San Diego County, California (1999). Supervised 4-person field crew in recording 21 resources within the project area, including 17 prehistoric bedrock milling sites, two historic archaeological features, and two early twentieth century historic structures. The mining property is leased from the Pala Band of Mission Indians (Luiseño-Cupeño). Prepared final Phase I survey report and 21 sets of DPR 523 site record forms. Work performed under supervision of Roger D. Mason, Ph.D., RPA, Principal Investigator.
- **Long Haul Fiber-Optic Cable Network – Level (3) Network Communications.** Field Director for Phase I archaeological survey of 60 linear miles of the *Inland Route* fiber-optic cable installation corridor along the Union Pacific Railroad from Tehachapi to the Cajon Pass, southern Mojave Desert, Kern, Los Angeles, and San Bernardino Counties, California (1999). Supervised 4-person field crew in intensive, mile-by-mile rail corridor survey in extreme heat, relocating previously-recorded resources and identifying new resources. Accurate mapping of resources in relation to rails was crucial because of engineering constraints and encroachment permitting criteria. Prepared DPR 523 site record forms for 10 new resources, mostly railroad-related historic sites and features. Work performed under supervision of Roger D. Mason, Ph.D., RPA, Principal Investigator. Final survey report in preparation.



- **Cottonwood Hills – Pardee Construction Company.** Field Director for Phase I archaeological survey of a residential development property near Lake Elsinore, western Riverside County, California, and subsequent Phase II test excavations (1999). Supervised 2-person survey team of a hilly 40-acre property along the San Jacinto River where prehistoric materials in three previously unrecorded site areas had been exposed by grubbing equipment. Supervised 7-person field crew in point-provenience surface collections, systematic shovel test probes, and controlled excavation units at the three Late Period *San Luis Rey* sites (CA-RIV-6246, CA-RIV-6247, CA-RIV-6248). All material remaining in dry screens was water-screened onsite through ¼-inch mesh before sorting in the lab. Prepared final Phase I survey report and DPR 523 site record forms. Work performed under supervision of Roger D. Mason, Ph.D., RPA, Principal Investigator. Phase II test report in preparation.
- **Burbank Plaza Redevelopment Project - City of Burbank.** Conducted primary archival research to reconstruct history of land ownership and building construction within Block 56 in the City of Burbank, Los Angeles County, California (1999). Research involving county archival records, Sanborn Fire Insurance Maps, historic photographs, and city telephone directories showed that development of the block was well under way by 1901, even though records prior to that year were lacking. Results of the study were used to target areas for construction monitoring when redevelopment of the block begins. Work performed under supervision of Jeanette A. McKenna, M.A., RPA, Principal Investigator.
- **Sierra Lakes Residential and Golf Course Development – Lewis Homes.** Field Director for Phase II test excavations and Phase III construction monitoring of five historic archaeological sites within a 640-acre development property in north Fontana, San Bernardino County, California (1997-1998). The sites included four circa 1890 homesteads (CA-SBR-6583H, CA-SBR-6585H, CA-SBR-6586H, CA-SBR-6589H,) and an early twentieth century site (CA-SBR-6584H). Supervised small excavation crews and individual construction monitors. Identified and inventoried historic materials in the lab. Work performed under supervision of Jeanette A. McKenna, M.A., RPA, Principal Investigator.
- **Northwest Golf Course Community - City of Oxnard.** Conducted primary archival research to reconstruct history of land ownership for the historic McLoughlin/Maxwell property along the Santa Clara River near the City of Oxnard, western Ventura County, California (1998). County records demonstrated an unbroken line of property ownership by the McLoughlin family from 1887 to recent years. Archival research was augmented with interviews of a surviving McLoughlin family member. The two-story 1926 residential manse on the site, designed by renowned architect A.C. Martin, will be relocated and preserved in the Oxnard area under CEQA and NRHP criteria. Work performed under supervision of Jeanette A. McKenna, M.A., RPA, Principal Investigator.
- **California Department of Forestry (CDF) and Fire Protection Murphys Station Site - State of California Real Estate Services Division (RESO).** Crew Chief for Phase III data recovery excavations at the CDF Forest Fire Station site at Murphys, Calaveras County, California (1997). Supervised 4-person field crew at a large multi-component prehistoric site (CA-CAL-1633) in the western foothills of the central Sierra Nevada Mountains. The site contains distinct occupation horizons from the late *Calaveras*/early *Sierra Phases* and later *Redbud Phase*, separated by roughly 500 years. Worked with CDF personnel and Miwok Native American monitors during excavations and station construction. Inventoried, analyzed, and illustrated archaeological materials in the lab and arranged for curation and transfer of the collection to the Calaveras County Museum in San Andreas. Work performed under supervision of Jeanette A. McKenna, M.A., RPA, Principal Investigator.
- **Hidden Valley Golf Course - John L. West Associates.** Field Director for Phase I reconnaissance survey, Phase II test excavations, and Phase III monitoring of a development property near Norco, western Riverside County, California (1997). During Phase I, 13 prehistoric sites were re-located and re-documented. Phase II included test excavations at three of these (CA-RIV-1449, CA-RIV-1450, CA-RIV-1453) where surface artifacts and rock art were present. Monitoring of construction activity was conducted for Phase III. Supervised small excavation crews and individual monitors. Work performed under supervision of Jeanette A. McKenna, M.A., RPA, Principal Investigator.



**CULTURAL RESOURCES MANAGEMENT REPORTS – PRINCIPAL AUTHOR**

- 2002      *Positive Archaeological Survey Report (ASR) for the Sierra–Baseline Widening and Improvement Project in the City of Fontana, San Bernardino County, California.* Prepared for David Evans and Associates, Ontario.
- 2002      *Cultural Resources Reconnaissance Survey Summary Report, LAUSD Banning School No. 1, Wilmington (Letter).* Prepared for The Planning Center, Costa Mesa.
- 2002      *Cultural Resources Records Search Summary Report, LAUSD Banning School No. 1, Wilmington (Letter).* Prepared for The Planning Center, Costa Mesa.
- 2002      *Cultural Resources Records Search and Survey Report for the Cobalt Construction Equipment Storage Property in Soledad Canyon, Los Angeles County, California.* Prepared for Cobalt Construction, La Crescenta.
- 2002      *Archaeological and Paleontological Monitoring Report, Including Analysis of Recovered Materials for the W Hotel Redevelopment Site in Downtown San Diego, San Diego County, California.* Prepared for Gatehouse Capital Corporation, Dallas.
- 2002      *Cultural Resources Reconnaissance Survey Summary Report, LAUSD Middle School No. 1, Los Angeles (Letter).* Prepared for The Planning Center, Costa Mesa.
- 2002      *Cultural Resources Records Search Summary Report, LAUSD Middle School No. 1, Los Angeles (Letter).* Prepared for The Planning Center, Costa Mesa.
- 2002      *Cultural Resources Records Search and Survey Report for a Portion of Decker Camp Near Malibu, Los Angeles County, California.* Prepared for Design Space Modular Buildings, Fontana.
- 2002      *Negative Archaeological Survey Report (ASR) for the Burlington Northern Santa Fe (BNSF) Soundwall Project in the City of Anaheim, Orange County, California.* Prepared for Bonterra Consulting, Costa Mesa.
- 2002      *Positive Archaeological Survey Report (ASR) for the Historic El Camino Real (Camino Capistrano) Historical Corridor Enhancement Project in the City of San Juan Capistrano, Orange County, California.* Prepared for Bonterra Consulting, Costa Mesa.
- 2001      *Negative Archaeological Survey Report (ASR) for the Sand Canyon Avenue Grade Separation Project in the City of Irvine, Orange County, California.* Prepared for Moffatt & Nichol, Long Beach.
- 2001      *Cultural Resources Records Search and Constraints Analysis Report: LAX / South (Orange County) High Speed Ground Access Study, Los Angeles and Orange Counties, California.* Prepared for URS/BRW, Denver.
- 2001      *Cultural Resources Records Search and Survey Report for the Quinta Do Lago Elementary School Site near Temecula, Riverside County, California.* Prepared for The Planning Center, Costa Mesa.
- 2001      *Cultural Resources Survey and Paleontologic Resource Assessment for the Shinn Road over San Antonio Creek Project, Los Angeles County, California.* Prepared for Los Angeles County Department of Public Works, Alhambra.





- 2001      *Cultural Resources Records Search and Survey Report for the Rancho Bella Vista Middle School No. 6 Site near Temecula, Riverside County, California.* Prepared for The Planning Center, Costa Mesa.
  
- 2001      *Negative Archaeological Survey Report (ASR) for a One-Mile Segment of Foothill Boulevard in the City of Rancho Cucamonga, San Bernardino County, California.* Prepared for Parsons Brinckerhoff Quade & Douglas, Orange.
  
- 2001      *Cultural Resources Records Search and Constraints Analysis Report for the Cajon Expansion Pipeline, Adelanto to Chino, San Bernardino County, California.* Prepared for The Gas Company / Sempra Energy, Los Angeles.
  
- 2001      *Negative Archaeological Survey Report (ASR) for a One-Mile Segment of Foothill Boulevard in the City of Rancho Cucamonga, San Bernardino County, California.* Prepared for Parsons Brinckerhoff Quade & Douglas, Orange.
  
- 2001      *Cultural Resources Records Search and Constraints Analysis Report for the Topock Expansion Pipeline near Needles, San Bernardino County, California.* Prepared for The Gas Company / Sempra Energy, Los Angeles.
  
- 2001      *Cultural Resources Records Search and Survey Report and Paleontologic Resources Literature Review for the Glendora Ranch Property Near Glendora, Los Angeles County, California.* Prepared for Glendora East Ranch, LLC, Glendora.
  
- 2001      *Cultural Resources Staff Assessment for the Proposed Valero Cogeneration Power Plant Project, Benecia, Solano County, California.* Prepared for California Energy Commission, Sacramento.
  
- 2001      *Cultural Resources Survey Report, AT&T San Luis Obispo to Los Angeles Fiber-Optic Cable Installation Project, Segment D: Santa Barbara to Oxnard and Segment E: Oxnard to Simi Valley, Santa Barbara and Ventura Counties.* Prepared for County of San Luis Obispo, San Luis Obispo.
  
- 2001      *Cultural Resources Records Search and Survey Report for the Otay Ranch Proctor Valley Property, Jamul Area, San Diego County, California.* Prepared for Otay Land Company, Carlsbad.
  
- 2001      *Historic Property Survey Report (HPSR) and Negative Archaeological Survey Report (ASR) for Interstate 5/Valle Road Interchange Expansion near San Juan Capistrano, Orange County, California.* Prepared for SunCal Companies, Anaheim.
  
- 2001      *Negative Archaeological Survey Report (ASR) for Groundwater Monitoring Wells along Ortega Highway (State Route 74), San Juan Capistrano, Orange County, California.* Prepared for Miller Brooks Environmental, Huntington Beach.
  
- 2001      *Negative Archaeological Survey Report (ASR) for Hardin Honda Parking Lot, Anaheim, Orange County, California.* Prepared for Hardin Honda, Anaheim.
  
- 2001      *Results of Archaeological Test Programs at CA-RIV-6467, CA-RIV-6468H, and CG/MR-3, Montecito Ranch Property near Corona, Riverside County, California.* Prepared for Citation Homes, Irvine.
  
- 2001      *Cultural Resources Survey Report for Level 3 Long Haul Fiber-Optic Project: WS06 Carpinteria Workaround, in the City of Carpinteria and an Adjacent Unincorporated Area, Santa Barbara County, California.* Prepared for Level (3) Project Office, Pleasanton.



- 2001 Cultural Resources Records Search and Survey Report for Level 3 Fiber-Optic Project: WS04 Devore Alternatives, San Bernardino County, California. Prepared for Level (3) Project Office, Pleasanton.
- 2000 *Cultural Resources Records Search and Field Survey and Paleontologic Resources Literature Review Report for Level (3) Fiber-Optic Project: Highway 1 Workaround, Santa Barbara County, California.* Prepared for Level (3) Project Office, Pleasanton.
- 2000 Cultural Resources Records Search and Survey Report for the National Cement Mine Expansion Area, Lebec Plant, Kern County, California. Prepared for Kennedy-Jenks Consultants, Bakersfield.
- 2000 *Cultural Resources Records Search and Survey Report for the WS06 Los Osos Re-Route Fiber-Optic Connection Corridor, City of San Luis Obispo, San Luis Obispo County, California.* Prepared for Level (3) Project Office, Pleasanton.
- 2000 *Cultural Resources Records Search and Archaeological Survey Report for the Montecito Ranch Property Near Corona, Riverside County, California.* Prepared for Citation Homes, Irvine.
- 2000 *Cultural Resources Records Search and Standing Structure Review for the Montecito Ranch Property Near Corona, Riverside County, California.* Prepared for Citation Homes, Irvine.
- 2000 *Cultural Resources Records Search and Survey Report for the WS02 Oakland Re-Route Fiber-Optic Connection Corridor, City of Oakland, Alameda County, California.* Prepared for Level (3) Project Office, Pleasanton.
- 2000 *Archaeological Monitoring of Space 224, El Morro Village, Crystal Cove State Park (Letter).* Prepared for Newport Pacific Capital (El Morro Village), Laguna Beach.
- 2000 *Cultural Resources Records Search and Survey Report for the Sunset Pointe Property, Los Penasquitos Area, San Diego County, California.* Prepared for Pardee Construction Company, Irvine.
- 2000 *Cultural Resources Records Search and Survey Report for a Portion of Tuna Canyon Road, Malibu Area, Los Angeles County, California.* Prepared for Department of Public Works, County of Los Angeles.
- 2000 *Galivan Retarding Basin (Phase II) and Oso Creek Channel: Results of Archaeological Monitoring (Letter).* Prepared for Construction Division, Public Facilities and Resources Department, County of Orange, Santa Ana.
- 2000 *Cultural Resources Records Search Report for the Southern California Gas Montebello Natural Gas Storage Facility Project Area, Montebello and Monterey Park, Los Angeles County, California.* Prepared for Sempra Energy, Los Angeles.
- 2000 *Cultural Resources Records Search and Paleontologic Resources Literature Review Report for the Sempra Energy Gas Lease Sale Project Area, Playa Del Rey and a Portion of the City of Los Angeles, Los Angeles County, California.* Prepared for Sempra Energy, Los Angeles.
- 2000 *Cultural Resources Records Search Report and Constraints Analysis for the Sage Ranch Nursery I and II Properties, Riverside County, California.* Prepared for Mazurek and Associates, Newport Beach.



- 2000      *Phase I Archaeological Resource Report for Level (3) Communications, City of Santa Barbara Coastal Development Permit Application, Santa Barbara County, California.* Prepared for City of Santa Barbara Planning Division, Historic Landmarks Commission, Santa Barbara.
- 2000      *Negative Archaeological Survey Report (ASR), Mount Vernon Bridge Reconstruction, San Bernardino, San Bernardino County, California.* Prepared for Parsons Brinckerhoff Quade & Douglas, Orange.
- 2000      *Historic Property Survey Report (HPSR) and Negative Archaeological Survey Report (ASR), Interstate 10/Gene Autry Trail/Palm Drive Interchange, Palm Springs, Riverside County, California.* Prepared for Parsons Brinckerhoff Quade & Douglas, Inc., Orange.
- 2000      *Historic Property Survey Report (HPSR) and Negative Archaeological Survey Report (ASR), Interstate 10/Dale Palm Drive Interchange, Palm Springs, Riverside County, California.* Prepared for Parsons Brinckerhoff Quade & Douglas, Inc., Orange.
- 1999      *Cultural Resources (CA-SBR-3131H), Tracy Property, Etiwanda, San Bernardino County (Letter).* Prepared for Sierra Pacific Management, Irvine.
- 1999      *Cultural Resources Survey Report For the CalMat/Pala Operations Lease Property, Pala Indian Reservation, San Diego County, California.* Prepared for Vulcan Materials (CalMat Division), San Diego.
- 1999      *Cultural Resources Test Report CA-ORA-1481, Yorba Linda Estates Project, Yorba Linda, Orange County, California.* Prepared for Pulte Home Corporation, Tustin.
- 1999      *Cultural Resources Records Search and Survey Report for a Fiber-Optic Cable Connection Corridor, City of Lompoc, Santa Barbara County, California.* Prepared for Level (3) Network Communications, Pleasanton.
- 1999      *Cultural Resources Records Search and Survey Report for the Level (3) San Luis Obispo 3R and Los Osos Loop Fiber-Optic Connection Corridor, City of San Luis Obispo, San Luis Obispo County, California.* Prepared for Level (3) Network Communications, Pleasanton.
- 1999      *Cultural Resources Records Search and Survey Report for three Alternative Plans Involving the Proposed Extension of Chapman Heights Road, City of Yucaipa, San Bernardino County, California.* Prepared for Yucaipa-Calimesa Joint Unified School District, Yucaipa.
- 1999      *Cultural Resources Records Search and Survey Report for a Portion of Encinal Canyon Road, City of Malibu, Los Angeles County, California.* Prepared for Los Angeles County Department of Public Works.
- 1999      *Cultural Resources Records Search and Survey Report for a Portion of the Cactus Road Site, Otay Mesa Area, San Diego County, California.* Prepared for ENV AMERICA, Irvine.
- 1999      *Archaeological Test Report for the Lompoc 3P In-Line Amplifier Station Site in the City of Lompoc, Santa Barbara County, California.* Prepared for Level (3) Network Communications, Pleasanton.
- 1999      *Archaeological Test Report for the Level (3) Communications 3R D-Node Property, City of San Luis Obispo, San Luis Obispo County, California.* Prepared for Level (3) Project Office, Pleasanton.



- 1999 *Negative Archaeological Survey Report (ASR), Interstate 710/Atlantic Boulevard/Bandini Boulevard Interchange, Cities of Vernon and Bell, Los Angeles County, California.* Prepared for Parsons Brinckerhoff Quade & Douglas, Inc., Orange.
- 1999 *Supplemental Cultural Resources Survey Report for the Northwestern Portion of the Cottonwood Hills Project Area, Riverside County, California.* Prepared for Pardee Construction Company, Irvine.
- 1999 *Archaeological Monitoring Program, La Cañada/Flintridge Sewer Collection System, Los Angeles County, California.* Prepared for Willdan Associates, Industry.
- 1998 *A Phase I Cultural Resources Investigation of the Carter Property, Tentative Tract 24567, Acton, Los Angeles County, California.* Prepared for Land Tech Engineering, Van Nuys.
- 1998 *A Phase I Cultural Resources Investigation of the Tuma Property, Vesting Tentative Tract 22782, Acton, Los Angeles County, California.* Prepared for Land Tech Engineering, Van Nuys.
- 1997 *Preliminary Cultural Resources Assessment, Southlands Church Expansion Project, Diamond Bar, Los Angeles County, California (Letter).* Prepared for EIP Associates, Los Angeles.
- 1997 *A Phase I Cultural Resources Investigation of Tract 15544, Bloomington, San Bernardino County, California.* Prepared for Thatcher Engineering & Associates, Yucaipa.
- 1997 *A Phase I Cultural Resources Investigation of Tract 15788, Highland, San Bernardino County, California.* Prepared for Thatcher Engineering & Associates, Yucaipa.
- 1997 *A Phase I Cultural Resources Investigation of the Proposed Lindero Canyon Park, Westlake Village, Los Angeles County, California.* Prepared for Willdan Associates, Industry.
- 1997 *A Phase I Cultural Resources Investigation for Camp Big Pines, Los Angeles County, California.* Prepared for Armenian Youth Federation, Camp Big Pines.
- 1997 *A Phase I Cultural Resources Investigation of the Proposed Shadow Pines Residential Development in the Soledad Canyon Area, Los Angeles County, California.* Prepared for Envicom Corporation, Agoura Hills.
- 1997 *A Phase I Cultural Resources Investigation of an Approximately 0.5-Acre Parcel in Lake Elsinore, Riverside County, California.* Prepared for EIP Associates, Sacramento.
- 1997 *Phase III Archaeological Monitoring Program for Abilene Street Reconstruction, City of Rosemead, Los Angeles County, California.* Prepared for City of Rosemead.
- 1997 *A Phase I Cultural Resources Investigation of Two 9-Acre Parcels and Associated Right-of-Ways, Adelanto, San Bernardino, California.* Prepared for Urban Logic Consultants, Temecula.
- 1997 *A Phase I Cultural Resources Investigation of a 5-Acre Parcel, Coalinga, Fresno County, California.* Prepared for State of California Real Estate Services Division, Sacramento.
- 1997 *A Phase I Cultural Resources Investigation of Two 2-Acre Parcels, Independence, Inyo County, California.* Prepared for State of California Real Estate Services Division, Sacramento.



- 1997      *A Phase I Cultural Resources Investigation of Two 5-Acre Parcels near Oakhurst, Madera County, California.* Prepared for State of California Real Estate Services Division, Sacramento.
- 1997      *A Phase I Cultural Resources Investigation of a 2.85-Acre Parcel, Three Rivers, Tulare County, California.* Prepared for State of California Real Estate Services Division, Sacramento.
- 1996      *A Phase I Cultural Resources Investigation of a 3-Acre Parcel and Associated Pipeline, Beaumont, Riverside County, California.* Prepared for Urban Logic Consultants, Temecula.

**CULTURAL RESOURCES MANAGEMENT REPORTS – CONTRIBUTING AUTHOR**

- 2001      *Results of Archaeological Test Programs at CA-SDI-14,120 (P-37-014339) and CA-SDI-14,146H (P-37-014361), Shaw/Lorenz Property, Del Mar Mesa Area, City of San Diego, San Diego County, California.* Prepared for Pardee Construction Company, Los Angeles.
- 2000      *Cultural Resources Survey Report for Level (3) Long Haul Fiber-Optic Project: Connection to Bakersfield ILA, Southeast of the City of Bakersfield, Kern County, California.* Prepared for Level (3) Project Office, Pleasanton.
- 2000      *Cultural Resources Survey Report for Level (3) Long Haul Fiber-Optic Project: WS04 Connection to Fresno ILA, in the City of Fresno, Fresno County, California.* Prepared for Level (3) Project Office, Pleasanton.
- 2000      *Cultural Resources Survey Report for Level (3) Long Haul Fiber-Optic Project: WS04 Connection to Hanford ILA, near the City of Hanford, Kings County, California.* Prepared for Level (3) Project Office, Pleasanton.
- 2000      *Cultural Resources Survey Report for Level (3) Long Haul Fiber-Optic Project: WS04 Connection to Stockton ILA, in the City of Stockton, San Joaquin County, California.* Prepared for Level (3) Project Office, Pleasanton.
- 2000      *Cultural Resources Survey Report and Paleontologic Resources Literature Review Report for Level (3) Long Haul Fiber-Optic Project: Kadota ILA, in the City of Merced, Merced County, California.* Prepared for Level (3) Project Office, Pleasanton.
- 2000      *Cultural Resources Survey Report and Paleontologic Resources Literature Review Report for Level (3) Long Haul Fiber-Optic Project: San Martin ILA, in the City of Morgan Hill, Santa Clara County, California.* Prepared for Level (3) Project Office, Pleasanton.
- 2000      *Cultural Resources Survey Report and Paleontologic Resources Literature Review Report for Level (3) Long Haul Fiber-Optic Project: Sandrini ILA, near the City of Delano, Kern County, California.* Prepared for Level (3) Project Office, Pleasanton.
- 2000      *Cultural Resources Survey Report and Paleontologic Resources Literature Review Report for Level (3) Long Haul Fiber-Optic Project: Soledad ILA, in the City of Soledad, Monterey County, California.* Prepared for Level (3) Project Office, Pleasanton.
- 2000      *Cultural Resources Survey Report and Paleontologic Resources Literature Review Report for Level (3) Long Haul Fiber-Optic Project: Summit ILA, in the Community of Monolith, Kern County, California.* Prepared for Level (3) Project Office, Pleasanton.



- 2000      *Cultural Resources Survey Report and Paleontologic Resources Literature Review Report for Level (3) Long Haul Fiber-Optic Project: Wash ILA, near Littlerock, Los Angeles County, California. Prepared for Level (3) Project Office, Pleasanton.*
- 2000      *Cultural Resources Survey Report for Level (3) Long Haul Fiber-Optic Project: WS04 Connection to Fresno 3R Facility, in the City of Fresno, Fresno County, California. Prepared for Level (3) Project Office, Pleasanton.*
- 2000      *Cultural Resources Survey Report and Paleontologic Resources Literature Review Report for Level (3) Long Haul Fiber-Optic Project: Tionesta 3R Facility Site and Connector Route near Tionesta, Modoc County, California. Prepared for Level (3) Project Office, Pleasanton.*
- 1999      *Cultural Resources Survey Report and Paleontologic Resources Literature Review Report for Level 3 Long Haul Fiber-Optic Project: San Luis Obispo 3R D-Node, in the City of San Luis Obispo, San Luis Obispo County, California. Prepared for Level (3) Project Office, Pleasanton.*
- 1999      *Cultural Resources Investigations and Building Evaluations for the Proposed Burbank Plaza Project in the City of Burbank, Los Angeles County, California. Prepared for Impact Sciences, Agoura Hills.*
- 1998      *Historic Research and Review of the McLaughlin/Maxwell Property, Located in Both Unincorporated Ventura County (250 Acres) and the City of Oxnard (80 Acres), Ventura County, California. Prepared for Impact Sciences, Agoura Hills.*
- 1998      *Historic Archaeological Investigations of Sites Located within the Chapman Heights Project Area, Yucaipa, San Bernardino County, California. Prepared for Communities Southwest, Irvine.*
- 1998      *An Intensive Archaeological Survey of the Collins Property: Tentative Parcel Map No. 15088, A 20 Acre Parcel in Hesperia, San Bernardino County, California. Prepared for Cubit Engineering, Hesperia.*
- 1997      *A Phase III Archaeological Mitigation/Monitoring Program for Sites Identified Within the Proposed Hidden Valley Golf Course Property, City of Norco, Riverside County, California. Prepared for John L. West Associates, Riverside.*
- 1997      *Phase III Archaeological Test Excavations and Data Recovery Program at CA-CAL-1633, a Native American Miwok Site Located in the Community of Murphys, Calaveras County, California. Prepared for State of California Real Estate Services Division, Sacramento.*
- 1997      *A Phase I Cultural Resources Investigation of the Proposed California Department of Forestry "Ogo" Fire Station Relocation Project, Located Near Ono, Shasta County, California. Prepared for State of California Real Estate Services Division, Sacramento.*
- 1996      *A Phase I Cultural Resources Investigation for the Proposed Whittier Narrows Soccer Complex, Whittier Narrows Dam County Recreational Area, Los Angeles County, California. Prepared for Los Angeles County Department of Parks and Recreation.*



**ROGER D. MASON, PH.D.**  
**PRINCIPAL INVESTIGATOR/PROJECT ARCHAEOLOGIST**

Dr. Mason has been professionally involved with cultural resources management in southern California since 1983. Dr. Mason is the author of over 100 reports dealing with cultural resource surveys, evaluations, and mitigation programs in all southern California counties. Section 106 experience includes successful nomination of the San Antonio Terrace Archaeological District on Vandenberg AFB to the NRHP and preparing a Historic Preservation Plan for the District. Dr. Mason was also Principal Investigator for the data recovery and construction monitoring program for the San Joaquin Hills Transportation Corridor, a Section 106 project reviewed by Caltrans. Prior to joining Chambers Group, Dr. Mason was the Principal Investigator for the Newport Coast Archaeological Project in coastal Orange County. This project was the largest privately funded cultural resources mitigation program on the West Coast and involved data recovery excavations at 35 sites. Dr. Mason has also prepared numerous cultural resources sections for CEQA documents, is a consultant to the California Energy Commission, and is the on-call reviewer for cultural resources sections of EIRs for the City of Carlsbad. Recently, Dr. Mason was named to the Year 2000 Edition of the Marquis Who's Who in America.

## **EDUCATION**

Ph.D., Anthropology (Archaeology), University of Texas at Austin  
B.A., Anthropology, University of Washington

## **REGISTRATIONS, AFFILIATIONS, AND CERTIFICATIONS**

- Registered Professional Archaeologist (RPA)
- Orange County Certified Archaeologist
- Riverside County Qualified Archaeologist
- American Anthropological Association
- Society for American Archaeology
- Society for California Archaeology
- Pacific Coast Archaeological Society

## **PROFESSIONAL EXPERIENCE**

- **Power Plant Certification Projects in California - Aspen Environmental Group/California Energy Commission.** Served as cultural resources consultant to the California Energy Commission for the following power plant projects: Huntington Beach, Modesto, Potrero (San Francisco), Rio Linda Elverta (Sacramento), East Altamont (Livermore), Russell City (Hayward), and Inland Empire (Peris-Hemet). Reviewed Applications for Certification, submitted Data Requests, attended workshops, wrote cultural resources sections of staff assessments.
- **Putuidem (CA-ORA-855) Data Recovery Program - Archon Group.** Co-Principal Investigator - Designed and implemented a data recovery program at a Juaneño village site in San Juan Capistrano dating to the Late Prehistoric Period. Previous work at the site had been performed by field schools from Cypress College over a 15 year period. The data recovery program was designed to complete mitigation of impacts so that the property could be developed. All work was coordinated with and monitored by the Juaneño Band of Mission Indians. The final report incorporated data from the field schools and the data recovery program and included ethnohistoric information about the site.



- **Pacific Highlands Ranch Data Recovery and Indexing Program - Pardee Construction Company.** Principal Archaeologist - Directed data recovery at four prehistoric sites and "indexing" at five sites that were to be preserved in open space, as required by the project EIR for the Pacific Highlands Ranch project north of Carmel Valley in the City of San Diego. The subsurface boundaries of concentrations of cultural material within each site slated for data recovery were defined by excavating a total of 252 systematically spaced shovel test probes (STPs) in several phases of work. As required by the City, the data recovery program consisted of hand excavation of 78 1 by 1 meter units comprising a five percent sample of each concentration within each site. A report was completed that provides an interpretation of activities carried out at these sites which were occupied during the early part of the La Jolla Complex (circa 9,000 to 6,000 BP).
- **NEPA Compliance Environmental Documentation for Installation and/or Modification of Digital Cellular Telephone Communication Facilities throughout Southern California - Confidential Client.** Directed cultural resources studies for this large-scale program. Records searches and field surveys were conducted, and reports prepared, to document potential impacts on cultural resources for over 500 cellular communications facilities throughout southern and central California.
- **Environmental Services for California Segments of Nationwide Fiber-Optic Cable Network - Confidential Client.** Managed cultural resources studies for this large-scale project, which consisted of fiber-optic network construction from Oakland to Los Angeles via San Luis Obispo and from Sacramento to San Bernardino via Bakersfield. Approximately 75 percent of the buried fiber-optic cable system was located within railroad right-of-ways, with the rest in highway right-of-ways. Responsibilities included records searches, cultural resources surveys, subsurface testing, data recovery, and construction monitoring. Cultural resources surveys and checklists for CEQA Preliminary Environmental Assessments for construction of off-right-of-way facilities throughout California were also prepared.
- **San Joaquin Hills Transportation Corridor Archaeological Data Recovery Program - Sverdrup/Transportation Corridor Agencies.** Project Archaeologist - Directed data recovery (major archaeological excavation) as mitigation of impacts for six archaeological sites determined eligible by the SHPO prior to construction and for six sites found during monitoring that met the eligibility requirements of the Treatment Plan. Duties included coordination with the project Native American Most Likely Descendant and monitors and participants from both Gabrielino and Juaneno Native American groups. Completed six data recovery reports that were reviewed and accepted by Caltrans with little or no revisions.
- **San Joaquin Hills Transportation Corridor Archaeological Monitoring Program - Sverdrup/Transportation Corridor Agencies.** Project Archaeologist - Directed construction monitoring over a period of 42 months during construction of the 14 mile long toll road. Wrote a Treatment Plan accepted by Caltrans and SHPO that determined whether data recovery would be necessary for sites found during construction. This made it unnecessary to consult with SHPO each time a site was discovered during construction, thereby avoiding construction delays. Evaluated nine sites in accord with the Treatment Plan to determine if data recovery was necessary.
- **Ford Road Archaeological Test Program - Sverdrup/Transportation Corridor Agencies.** Project Archaeologist - Directed Section 106 test program at five archaeological sites that could be impacted by construction of Ford Road. Wrote test report and Request for Determination of Eligibility reviewed and approved by the Corps of Engineers and SHPO for the five sites. Wrote Data Recovery Plan reviewed and approved by the Corps of Engineers and SHPO for the two sites that were determined eligible and that would be impacted by construction.





- **Ford Road Archaeological Data Recovery Plan - Sverdrup/Transportation Corridor Agencies.** Project Archaeologist - Directed data recovery (major archaeological excavation) as mitigation of impacts for two archaeological sites determined eligible by the SHPO prior to construction. Coordinated Native American observer program during field work. Completed data recovery report that was reviewed and accepted by the Corps of Engineers with no revisions.
- **Ford Road Archaeological Construction Monitoring Program - Sverdrup/Transportation Corridor Agencies.** Project Archaeologist - Directed construction monitoring and coordinated with Native American monitors over a period of 27 months during the construction of the road. Directed controlled grading of two archaeological sites after completion of data recovery.
- **Newport Coast Archaeological Project - The Irvine Company.** Principal Investigator - Wrote a research design and carried out data recovery for 32 archaeological sites in this four square mile tract. The project area included the ridges and canyons of the coastal slopes of the San Joaquin Hills and the marine terraces south of Corona Del Mar. This was the largest privately funded archaeological project in the western United States. Duties included coordination with the project Native American Most Likely Descendant and monitors and participants from both Gabrielino and Juaneno Native American groups.
- **Historic Property Survey Reports - Various Cities/Caltrans.** Cultural Resources Manager - Was co-author for six Historic Property Survey Reports using Caltrans Section 106 guidelines. These were for Caltrans local assistance street widening projects in various cities in southern California.
- **Del Mar Highlands Estates Data Recovery Program - Pardee Construction.** Principal Investigator - Directed data recovery program at SDI-13,094, a Milling Stone Period site dating to about 5,000 years ago near the San Dieguito River in the City of San Diego. Both randomly placed and block excavation units were used to recover cultural material from the site in general and from three fire-affected rock features (hearths). Also directed indexing program at another site with both a prehistoric and a historic component.
- **Oak Park III Data Recovery Program - Pardee Construction.** Principal Investigator - Directed data recovery program at VEN-1020, a Late Period camp in Ventura County used for yucca roasting and hunting. The project included a magnetometer program to locate fire-affected rock features that included roasting pits and hearths. The results were presented in a report that provided information about activities carried out at a field camp probably used by people from a nearby village in the Ventureño Inland Chumash area.
- **Vandenberg Air Force Base Cultural Resources Services - National Park Service/Vandenberg Air Force Base.** Principal Investigator - Directed two year cultural resources survey of entire base (90,000 acres) during which over 600 new archaeological sites were recorded.
- **Third Party As-Needed Environmental Impact Report Review for CEQA Compliance - City of Carlsbad.** Task Leader for Cultural Resources - Provided review of draft Environmental Impact Reports (EIRs) for a variety of projects prior to the release of the documents to the public. Environmental documents and supporting technical reports are reviewed for methodology, adequacy of analysis, completeness, and compliance with CEQA, as well as local, state, and federal laws and policies.



## PROFESSIONAL HISTORY

- 1993 Director of Cultural Resources, Chambers Group, Inc., Irvine, CA. Principal Investigator, San Joaquin Hills Transportation Corridor Archaeological Mitigation Program: Data recovery at 12 sites, plus construction monitoring. Principal Investigator, Vandenberg Air Force Base Open-End Cultural Resources Services Contract: Survey of entire base (90,000 acres; over 600 sites).
- 1990-1993 Director of Archaeology, The Keith Companies, Costa Mesa, CA. Principal Investigator, Newport Coast Archaeological Project, Orange County, CA: Data recovery at 32 sites, plus construction monitoring.
- 1988-1990 Managing Archaeologist, The Keith Companies.
- 1987-1988 Senior Archaeologist, Tetra Tech, Inc., San Bernardino, CA. Principal Investigator and Project Manager of the San Antonio Terrace Archaeological District project, Vandenberg AFB, CA: Historic Preservation Plan for the district and survey, testing, and mitigation of sites to be affected by construction of ICBM test facilities.
- 1983-1987 Research Director, Project Director, Scientific Resource Surveys, Inc., Huntington Beach, CA. Responsible for research designs, planning of field work, and author and/or editor of all reports produced by SRS during this four-year period. Projects in all southern California counties.
- 1981-1982 Visiting Assistant Professor, Central Michigan University. Courses: New World Archaeology; Archaeological Method and Theory.
- 1977-1981 Staff Historical Archaeologist, Cannon Reservoir Human Ecology Project, University of Nebraska (funded by St. Louis District, U.S. Army Corps of Engineers): Archival research on frontier settlement systems in northeast Missouri.
- 1976-1978 Co-Principal Investigator, Proyecto Coatlan, Morelos-Guerrero Regional Center, Instituto Nacional de Antropología e Historia (INAH), Morelos, Mexico: Surface collection at an Aztec period provincial center (dissertation research).
- 1973 Co-Director, Xoxocotlan Surface Collection Project, Monte Alban, Oaxaca, Mexico.
- 1972 Field Assistant, Valley of Oaxaca Settlement Pattern Project, Monte Alban, Oaxaca, Mexico.

## PUBLICATIONS, PAPERS, AND REPORTS

### Articles

- In Press Complexity, Demography, and Change in Late Holocene Orange County. In *Cultural Complexity on the California Coast: Late Holocene Archaeological and Environmental Records*, edited by J. M. Erlandson and T. L. Jones. Perspectives in California Archaeology. Institute of Archaeology, University of California, Los Angeles. (Second author with H.C. Koerper and M. L. Peterson)



- 2000 Weighing and Counting Shell: A Response to Glassow and Claassen. *American Antiquity* 65:757-761. (Senior author with M. L. Peterson and J. A. Tiffany.)
- 1998 An Ochre Cogged Stone from Orange County. *Pacific Coast Archaeological Society Quarterly*, 34(1):59-72. (Junior author with H.C. Koerper.)
- 1998 Weighing Vs. Counting: Measurement Reliability and the California School of Midden Analysis. *American Antiquity* 63:303-324. (Senior author with M. L. Peterson and J. A. Tiffany.)
- 1997 Middle Holocene Adaptations on the Newport Coast of Orange County. In *Archaeology of the California Coast During the Middle Holocene*, edited by J.M. Erlandson and M.A. Glassow, pp. 35-60. Perspectives in California Archaeology, Volume 4. Institute of Archaeology, University of California, Los Angeles. (Senior author with H.C. Koerper and P.E. Langenwaller.)
- 1996a Archaeological, Ethnohistoric, and Historic Notes Regarding ORA-58 and Other Sites Along the Lower Santa Ana River Drainage, Costa Mesa. *Pacific Coast Archaeological Society Quarterly* 32(1):1-36. (Junior author with H.C. Koerper, D.E. Earle, and P. Apodaca.)
- 1996b Two Barbed Stone Spear Points from Coastal Orange County. *Pacific Coast Archaeological Society Quarterly* 32(1):50-64. (Junior author with H.C. Koerper, C. Prior, and R.E. Taylor.)
- 1996c Arrow Projectile Point Types as Temporal Types: Evidence from Orange County. *Journal of California and Great Basin Anthropology* 18:258-283. (Junior author with H.C. Koerper, A.B. Schroth, and M.L. Peterson.)
- 1994 Morphological Types and Temporal Projectile Point Types: Evidence from Orange County, California. *Journal of California and Great Basin Anthropology* 16:81-105. (Junior author with H.C. Koerper and A.B. Schroth.)
- 1986 Summary of Work Carried Out at CA-LAN-43, The Encino Village Site. *Pacific Coast Archaeological Society Quarterly* 22(3):9-17.
- 1982 Historic Settlement Patterns. In *The Cannon Reservoir Human Ecology Project: An Archaeological Study of Cultural Adaptations in the Southern Prairie Peninsula*, edited by Michael J. O'Brien, Dennis E. Lewarch, and Robert E. Warren, pp. 369-387. Academic Press, New York.
- 1982 A Regional Chronology of the Early Historic Period. In *The Cannon Reservoir Human Ecology Project, An Archaeological Study of Cultural Adaptations in the Southern Prairie Peninsula*, edited by Michael J. O'Brien, Dennis E. Lewarch, and Robert E. Warren, pp. 131-141. Academic Press, New York.
- 1982 The Structure of Historic Communities. In *The Cannon Reservoir Human Ecology Project: An Archaeological Study of Cultural Adaptations in the Southern Prairie Peninsula*, edited by Michael J. O'Brien, Dennis E. Lewarch, and Robert E. Warren, pp. 301-334. Academic Press, New York. (Co-author with M. O'Brien and J. Saunders.)



**Papers Presented**

- 1998            Demographic Dynamics in Late Holocene Orange County. Paper presented at the Annual Meeting of Society for California Archaeology, San Diego. (Second author with H.C. Koerper.)
- 1994            Results of the Newport Coast Archaeological Project. Paper presented at the Annual Meeting of the Society for California Archaeology, Ventura, California.
- 1993            The Middle Holocene Period on the Newport Coast, Orange County, California. Paper presented at the Annual Meeting of the Society for California Archaeology, Pacific Grove, California.
- 1991            Preliminary Results of the Newport Coast Archaeological Project. Presented at the Southern Data Sharing Meeting of the Society for California Archaeology, Los Angeles.
- 1990            Archaeometry and Archaeological Interpretation in the Newport Coast Archaeological Project. Presented at the 55<sup>th</sup> Annual Meeting of the Society for American Archaeology, Las Vegas, Nevada.

**Cultural Resource Management Reports - Principal Author**

- 2000            The Putuidem Project: Data Recovery at CA-ORA-855, San Juan Capistrano, California. Prepared for WSMI Partnership, C/O the Archon Group, Irving, Texas. (co-author)
- 1999            Archaeological Survey Report For Level 3 Long Haul Fiber-Optic Project: State Route 246 From Lompoc To Surf, State Route 1 From Las Cruces To Lompoc, And U.S. Highway 101 From Gaviota To Las Cruces, County Of Santa Barbara, California. Prepared for Parsons Brinckerhoff, Orange.
- 1999            Cultural Resources Survey Report for Level 3 Fiber-Optics Project: WS-02 in Oakland. Prepared for Level 3 Project Office, Pleasanton, California.
- 1999            Cultural Resources Survey Report for Level 3 Fiber-Optics Project: WS-07 in Oakland and Emeryville. Prepared for Level 3 Project Office, Pleasanton, California.
- 1999            Cultural Resources Survey Report for Level 3 Long Haul Fiber-Optics Project: County Road Workarounds Between Gaviota and Summerland, County of Santa Barbara, California. Prepared for Parsons Brinckerhoff, Orange.
- 1999            Results of Archaeological Test Programs at CA-RIV-1022, CA-RIV-3331, and CA-RIV-3332H, Cottonwood Hills Project Area, City of Lake Elsinore, Riverside County. Prepared for Pardee Construction Company, C/O Hewitt & McGuire, LLP, Irvine.
- 1998            Archaeological Evaluation Report for CA-ORA-855 on the 29.3-Acre Property South and East of the Intersection of Camino Capistrano and Junipero Serra Road, San Juan Capistrano, California. Prepared for Archon Group, Los Angeles.
- 1998            Cultural Resources Test Report: CA-ORA-1322/H and CA-ORA-1323H, Olinda Heights Project, Brea, Orange County, California. Prepared for SunCal Companies, Anaheim. (co-author)



- 1998 Cultural Resources Test And Data Recovery Report: CA-ORA-1321, Olinda Heights Project, Brea, Orange County, California. Prepared for SunCal Companies, Anaheim.
- 1998 Final Technical Report: Phase I, II, and III Archaeological Survey for Cultural Resources Inventory, Vandenberg Air Force Base, Santa Barbara County, California. Prepared for National Park Service, San Francisco, and Vandenberg Air Force Base.
- 1998 Indexing Program at CA-SDI-5372/H, Del Mar Highlands Estates Project, City of San Diego. Prepared for Pardee Construction, care of Hewitt & McGuire, LLP, Irvine.
- 1998 Oak Park III; Data Recovery at CA-VEN-1020, Oak Park, Ventura County. Prepared for Pardee Construction, care of Hewitt & McGuire, LLP, Irvine.
- 1998 Cultural Resources Element. EIR for Cypress Canyon Residential Development Project, Anaheim, California. Prepared for ROX Consulting Group, Tustin, California.
- 1998 Archaeological Constraints Analysis, El Morro Mobile Home Park Expansion and Improvement. Prepared for El Morro Community Association, Newport Beach, California.
- 1998 Archaeological Investigations at the Simi Valley Drive-In Theater Property, Simi Valley, California. Prepared for Patriot Homes, Inc., Sherman Oaks, California.
- 1997 Review of "A Research Design for the Evaluation of Archaeological Sites Within the Hellman Ranch Specific Plan Area." Prepared for the City of Seal Beach.
- 1997 Review of "Landscape and People of Bolsa Bay, Volume 1: Compendium of Themes and Models, Research Design for Analysis, Bolsa Bay Project." Prepared for the Koll Company.
- 1997 Addendum to Historic Study Report for Three Sites in the San Joaquin Hills Transportation Corridor, Southern Orange County. Prepared for Caltrans District 12, Santa Ana and Federal Highways Administration, Sacramento.
- 1997 Draft Technical Report: Phase I, II, and II Archaeological Survey for Cultural Resources Inventory, Vandenberg Air Force Base, Santa Barbara County, California. Prepared for National Park Service, San Francisco, and Vandenberg Air Force Base.
- 1997 San Joaquin Hills Transportation Corridor: Results of Data Recovery at CA-ORA-225. Prepared for Sverdrup Corporation, Irvine, and Transportation Corridor Agencies, Santa Ana.
- 1997 San Joaquin Hills Transportation Corridor: Results of Data Recovery at CA-ORA-206. Prepared for Sverdrup Corporation, Irvine, and Transportation Corridor Agencies, Santa Ana.
- 1997 San Joaquin Hills Transportation Corridor: Results of Data Recovery at CA-ORA-689, CA-ORA-736, and CA-ORA-1029. Prepared for Sverdrup Corporation, Irvine, and Transportation Corridor Agencies, Santa Ana.
- 1997 San Joaquin Hills Transportation Corridor: Results of Data Recovery at CA-ORA-1370, and CA-ORA-1432. Prepared for Sverdrup Corporation, Irvine, and Transportation Corridor Agencies, Santa Ana.



- 1997 Cultural Resources Survey Report for the Fairmont Estates Project in the City of Yorba Linda, Orange County, California. Prepared for ROX Consulting Group, Inc., Irvine.
- 1997 Heritage Research Overview and Survey Report for the Motorola Electrical Conduit Installation Project, Cleveland National Forest, Trabuco Ranger District, Orange County, California. Prepared for Harding Lawson Associates, Irvine.
- 1996 Final Report of Findings: Biological and Cultural Surveys on IRP Sites at the National Training Center at Fort Irwin, San Bernardino County, California. Prepared for U.S. Army Corps of Engineers, Los Angeles District.
- 1996 Cultural Resources Survey Report for the San Juan Basin Groundwater Management Plan Project, Orange County, California. Prepared for San Juan Basin Authority, San Juan Capistrano.
- 1996 San Joaquin Hills Transportation Corridor: Results of Data Recovery at CA-ORA-1398, CA-ORA-1431, CA-ORA-1433, CA-ORA-1436, and CA-ORA-1438. Prepared for Sverdrup Corporation, Irvine, and Transportation Corridor Agencies, Santa Ana.
- 1996 San Joaquin Hills Transportation Corridor: Results of Data Recovery at CA-ORA-125 and CA-ORA-1295. Prepared for Sverdrup Corporation, Irvine, and Transportation Corridor Agencies, Santa Ana.
- 1996 Review of "A Research Design and Investigation Program for Test Level Evaluations of Archaeological Sites Located on the Hellman Ranch, City of Seal Beach, California." Prepared for City of Seal Beach.
- 1996 Archaeological Test Program Report for CA-LAN-2310 in the Monarch Hills Project Near the City of Santa Clarita, Los Angeles County, California. Prepared for Pardee Construction, Los Angeles.
- 1996 Results of Data Recovery at CA-ORA-482 and CA-ORA-106: New Ford Road Project, Irvine, California. Prepared for Sverdrup Corporation, Irvine, and Transportation Corridor Agencies, Santa Ana.
- 1995 Research Design for Data Recovery at CA-VEN-1020. Prepared for Pardee Construction, Los Angeles.
- 1995 Archaeological Resources Protection Plan for the Background Study Sampling Areas at Naval Weapons Station, Seal Beach, Orange County, California. Prepared for International Technology Corporation, Irvine, and Naval Facilities Engineering Command, San Diego.
- 1995 Archaeological Resources Protection Plan for Installation Restoration Sites 5, 8, 12, 16, 21, 40, 44, and 46 at Naval Weapons Station, Seal Beach, Orange County, California. Prepared for International Technology Corporation, Irvine, and Naval Facilities Engineering Command, San Diego.
- 1994 Treatment Plan for Archaeological Sites Discovered During Construction of the San Joaquin Hills Transportation Corridor, Orange County, California. Prepared for Sverdrup Corporation, Irvine, and Transportation Corridor Agencies, Costa Mesa.



- 1994 Archaeological Resources Protection Plan for Installation Remediation Sites 4, 8, 9, and SWMU 56, Naval Weapons Station, Seal Beach. Prepared for Accutek Environmental, Inc., Fountain Valley, and U.S. Navy, San Diego.
- 1994 Newport Coast Archaeological Project: Newport Coast Settlement Systems, Summary and Discussion. Prepared for Coastal Community Builders, Newport Beach. (Senior author with M. Peterson.)
- 1994 Newport Coast Archaeological Project: Results of Data Recovery from CA-ORA-274 and CA-ORA-670, Orange County, California. Prepared for Coastal Community Builders, Newport Beach.
- 1993 Data Recovery Plan: Prehistoric Archaeological Sites CA-ORA-106 and CA-ORA-482 within the Area of Potential Effect of the Proposed New Ford Road. Prepared for Sverdrup Corporation, Irvine, and Transportation Corridor Agencies, Costa Mesa.
- 1993 Test Program Results and Request for Determination of Eligibility for the Five Sites in the New Ford Road Alignment, Irvine, California. Prepared for Sverdrup Corporation, Irvine, and Transportation Corridor Agencies, Costa Mesa.
- 1993 Results of Historical Research and Recommendations for the Proposed Federal Building Site in Santa Ana, California. Prepared for National Park Service, Atlanta, and General Services Administration, San Francisco (with J.A. McKenna).
- 1993 Newport Coast Archaeological Project: Results of Data Recovery from the Pelican Hill Sites, CA-ORA-662 and CA-ORA-1203, Orange County, California. Prepared for Coastal Community Builders, Newport Beach.
- 1992 Newport Coast Archaeological Project: Results of Data Recovery from the French Flat Complex Sites, CA-ORA-232, CA-ORA-233, CA-ORA-671, CA-ORA-672, and CA-ORA-1205, Orange County, California. Prepared for Coastal Community Builders, Newport Beach.
- 1992 Newport Coast Archaeological Project: Results of Data Recovery at CA-ORA-667, Orange County, California. Prepared for Coastal Community Builders, Newport Beach.
- 1992 Newport Coast Archaeological Project: Data Recovery from Sites Impacted by Construction of Pacific Coast Highway (Inland Side) (CA-ORA-246 and CA-ORA-1208). Report prepared for Orange County EMA.
- 1992 Newport Coast Archaeological Project: Data Recovery at Area 13 of CA-ORA-662 (ICD 13) Impacted by Construction of Lower Loop Road. Report prepared for Orange County EMA.
- 1992 Newport Coast Archaeological Project: Data Recovery at Three Newport Coast Open Sites (ORA-673, 675, 684). Report prepared for Coastal Community Builders (The Irvine Company).
- 1992 Newport Coast Archaeological Project: Testing and Data Recovery at the Golf Course Sites (ORA-660, 664, 665, 666, 1229, 1230, 1231, 1232, 1233, and 1234). Report prepared for Coastal Community Builders (The Irvine Company).



- 1992 Cultural Resources Survey Report for the Lenwood Ranch Project, near Barstow, San Bernardino County, California.
- 1992 Cultural Resources Survey Report for Shadow Ridge Project near Palm Desert, Riverside County, California.
- 1992 Cultural Resources Survey Report for the Olinda Project, Brea, Orange County, California.
- 1991 Newport Coast Archaeological Project: Data Recovery at ORA-683. Report prepared for Coastal Community Builders (The Irvine Company).
- 1991 Newport Coast Archaeological Project: Data Recovery at the Wishbone Hill Sites (ORA-339, 340, 928, and 929). Report prepared for Coastal Community Builders (The Irvine Company).
- 1991 Newport Coast Archaeological Project: Data Recovery at the Late Small Rockshelter Sites (ORA-674, 676, 677, 678, 679, 682, 1204, 1206, and 1210). Report prepared for Coastal Community Builders (The Irvine Company).
- 1991 Newport Coast Archaeological Project: Data Recovery at the Pelican Hill Road Segment B Sites (ORA-221, 1085, and 1295). Report prepared for Orange County EMA and Coastal Community Builders (The Irvine Company).
- 1991 Newport Coast Archaeological Project: Project Background and Research Design. Prepared for Coastal Community Builders (The Irvine Company).
- 1991 Prehistoric Cultural Resources Survey Report and Analysis of Impacts for the Ford Road Realignment EIR, Orange County, California.
- 1991 Cultural Resources Survey Report for the Golden Castle Project, Lake Elsinore, Riverside County, California.
- 1991 Historic Property Survey Report for the Coachella Valley Water District Reservoir Sites EA/IS (Del Webb) and BLM Land Exchange, Riverside County, California.
- 1991 Cultural Resources Survey Report, Pepperwood Estates, City of San Juan Capistrano, Orange County, California.
- 1990 Cultural Resources Survey Report, Soquel Canyon Ranch, Chino Hills, San Bernardino County, California.
- 1990 Archaeological Test Program at Site SBR-5096 near State Route 71, San Bernardino County, California.
- 1990 Cultural Resources Report for General Plan Amendment/Zone Change 89-04B in the City of Poway, San Diego County, California.
- 1990 Cultural Resources Survey-Report, Santiago Canyon Road Alignment Study, Orange County, California.
- 1990 Archaeological Resources Survey Report for a 55-Acre Parcel of Land, Tentative Tract No. 13801 in Hickey Canyon, Southeast Orange County, California.





- 1990 Cultural Resources Survey Report of a 7-Acre Parcel in Chatsworth, City of Los Angeles, Los Angeles County, California.
- 1989 Report on Archaeological Auger Testing on Tract No. 13269 (Central Park No. 8) in the City of Huntington Beach, Orange County, California.
- 1989 Cultural Resources Survey Report: Marbella Terrace in the City of San Juan Capistrano, Orange County, California.
- 1989 Cultural Resources Survey Report for Tentative Tract No. 47856 in the City of Palmdale, Los Angeles County, California.
- 1989 Cultural Resources Survey Report, Tentative Tract No. 34038, Agua Dulce, Los Angeles County, California.
- 1989 Cultural Resources Survey Report for the Sterling Palmdale Project in Palmdale, Los Angeles County, California.
- 1989 Cultural Resources Survey Report for the 10-Acre Verdemont Site in San Bernardino County, California.
- 1989 Cultural Resources Survey Report for the State Route 67/Woodside Avenue Interchange, San Diego County, California.
- 1989 Cultural Resources Survey Report for the Laguna Heights Project, Riverside County, California.
- 1989 Cultural Resources Survey Report for the West Lake Elsinore Assessment District, Riverside County, California.
- 1989 Cultural Resources Survey for the McMillan Ranch Project near Corona, Riverside County, California.
- 1989 Cultural Resources Survey Report, Temecula Ranch, Aguanga Valley, Riverside County, California.
- 1989 Archaeological Data Recovery at Site ORA-1214, the Central Park #8 Project in the City of Huntington Beach, Orange County, California. Prepared for the Dahl Company.
- 1988 Archaeological Resources Survey Report for the Veluzat Property, Tentative Tract No. 45979 near Newhall, Los Angeles County, California.
- 1988 Historic Preservation Plan: San Antonio Terrace Archaeological District, Vandenberg Air Force Base, California. Prepared for the U.S. Air Force.
- 1987 Request for Determination of Eligibility: San Antonio Terrace Archaeological District, Vandenberg Air Force Base, California. Prepared for the U.S. Air Force.
- 1987 Cultural Resources Survey of Proposed Small Intercontinental Ballistic Missile and Peacekeeper Rail Garrison Test Areas, San Antonio Terrace, Vandenberg Air Force Base, California. Prepared for the U.S. Air Force.



- 1987            Test Plan for National Register Evaluation of Archaeological Sites on the Coyote Canyon Sanitary Landfill Property, Orange County, California. Prepared for the Orange County Waste Management Program.
- 1987            Research Design and Mitigation Plan for Archaeological Site CA-ORA-226 on the Coyote Canyon Sanitary Landfill Property, Orange County, California. Prepared for the Orange County Waste Management Program.
- 1987            Document of Eligibility for Archaeological Site CA-ORA-226 on the Coyote Canyon Sanitary Landfill Property, Orange County, California. Prepared for the Orange County Waste Management Program. (Senior author.)
- 1987            Research Design for Evaluation of Coastal Archaeological Sites in Northern Orange County, California.
- 1987            Historical Property Survey Report: Highway 74 (Fourth Street) Widening, City of Perris, California. Prepared for the City of Perris and Caltrans. (Co-author.)
- 1987            Archaeological Investigation of the Northwestern Part of CA-ORA-85, Bolsa Chica Mesa, Orange County, California.
- 1987            Cultural Resource Survey Reports and Overviews Associated with the Well Field and Weymouth Pipelines.
- 1987            Cultural Resource Survey Report for the Modification of the Etiwanda Pipeline Alignment.
- 1986            Historic Property Survey Report: Euclid Avenue Improvement Project, City of Upland, California. Prepared for the City of Upland. (Co-author.)
- 1986            Archival Research and Remote Sensing Investigations Concerning Reported Cemeteries and Isolated Graves in the Santa Ana River Project Area. Prepared for the Los Angeles District, U.S. Army Corps of Engineers. (Senior author.)
- 1986            Research Design for Data Recovery: A Mitigation Program for CA-ORA-83: The Cogged Stone Site on Bolsa Chica Mesa, Orange County, California.
- 1986            Archaeological Evaluation of CA-ORA-83: The Cogged Stone Site on Bolsa Chica Mesa, Orange County, California. (Co-author.)
- 1986            Amendment to the Historic Property Survey Report: Evaluation of Archaeological Site CA-ORA-368 for National Register of Historic Places Eligibility for the Warner Avenue Widening and Reconstruction Project in the City of Huntington Beach, California. Prepared for the City of Huntington Beach.
- 1986            Historic Property Survey and Evaluation of the Temecula Bridge (56C-165), Riverside County, California. Prepared for the County of Riverside. (Senior author.)
- 1986            Report on Prehistoric and Historic Investigations at Main Ranch, Riverside County, California.
- 1986            Phase I Results and Phase II Proposals for Archaeological Assessment of the Meadowlark Airport, Huntington Beach, California.



- 1985            Results of Test Excavations on Mescalitan Island, Site III, CA-SBR-46. Prepared for Goleta Sanitary District and the State Water Resources Control Board. (Co-author.)
- 1985            Research Design for Test Excavations on Mescalitan Island, Site III, SBA-46. Prepared for the Goleta Sanitary District and the State Water Resources Control Board.
- 1985            Final Archaeological Report, Rancho Poquitos Interceptor, Sonora-Standard, California. Prepared for the Tuolumne Regional Water District and the State Water Resources Control Board.
- 1985            Archaeological Investigations on the Cheroske Property, Mount Laguna, San Diego County, California.
- 1984            A Historical Study of Stewart Ranch in Riverside County, California. (Senior author.)
- 1984            Eastern Corridor Alignment Study, Orange County, California. Prepared for the County of Orange. (Senior author.)
- 1984            Historic Property Survey Report for the Arbor Vitae Street Improvement Project, Inglewood, California. Prepared for the City of Inglewood.
- 1984            Cultural Resource Survey Report on Wolfskill Ranch, Riverside County, California. (Senior author.)
- 1984            Loma San Elijo Archaeology, San Diego County, California. (Senior author.)
- 1983            Evaluation of Prehistoric and Historic Resources, Campo Hills, San Diego County, California.
- 1983            Historic Property Survey Report: Warner Avenue Widening and Reconstruction Project, City of Huntington Beach, California. Prepared for the City of Huntington Beach. (Co-author.)



## **APPENDIX IV**

**Appendix C: Updated Archeological Site Form  
(CA-SDI-11,423)**

ARCHAEOLOGICAL SITE RECORD

Page 1 of 2.

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1. County: San Diego.
  2. USGS Quad: Otay Mesa (7.5') 1955 (15')      Photorevised 1971
  3. UTM Coordinates: Zone 11 500880 m Easting 3602800 m Northing ( )
  4. SE 1/4 of SW 1/4 of NE 1/4 of NW 1/4 of Section 33, Township 18S, Range 1W,  
Base Mer. SBM
  5. Map Coordinates: 279 mmS 38 mmE (From NW corner of map)
  6. Elevation: 500 feet ( )
  7. Location: CA-SDI-11,423 is centered approx. 1200 feet south of Otay Mesa Rd (State Hwy 905) and 900 feet west of Cactus Rd on the mesa top overlooking Spring Canyon to the south. ( )
  8. Prehistoric X Historic      Protohistoric
  9. Site Description Widely dispersed, low density lithic scatter, presently consisting of 6 cobble core tools and flakes. ( )
  10. Area: approximately 90 m (300 ft) (NS) x 150 m (500 ft) (EW) = 9,000 m<sup>2</sup>  
(Note: site is irregularly shaped; total area indicated is 2/3 of mathematical total.)  
  
Method of Determination: Taped distances between artifacts and scale map plotting. ( )
  11. Depth: Unknown cm. Method of Determination: N/A ( )
  12. Features: None observed. ( )
  13. Artifacts: 3 large primary flake tools with modified and/or utilized edges, 1 large secondary flake tool with utilized edge, 1 small non-utilized primary flake (all 5 are green metavolcanic material); 1 multidirectional core made from a primary flake of dark metavolcanic material (poss. andesite). ( )
  14. Non-Artifactual Constituents and Faunal Remains: None observed. ( )
  15. Date Recorded: 06 / 29 / 99
  16. Recorded By: Richard S. Shepard, M.A. ( )
  17. Affiliation and Address: Chambers Group, Inc., 17671 Cowan Avenue, Ste. 100, Irvine, CA 92614.
-

## ARCHAEOLOGICAL SITE RECORD

Page 2 of 2.

- 
18. Human Remains: None observed. ( )
19. Site Disturbances: Agricultural activity in the past. ( )
20. Nearest Water (Type, distance and direction): Spring Canyon 500 feet to the south. ( )
21. Vegetation Community (site vicinity): Coastal sage scrub prior to agricultural activity. ( )
22. Vegetation (on site): Intrusive weeds and shrubs following discontinued agricultural activity. ( )
23. Site Soil: Light brown clay/silt loam. ( )
24. Surrounding Soil: Same. ( )
25. Geology: Pleistocene marine deposits. ( )
26. Landform: Basically flat mesa top; ancient marine terrace. ( )
27. Slope: Negligible; 2%.
28. Exposure: Open. ( )
29. Landowner(s) (and/or tenants) and Address:
30. Remarks: Agricultural activity on site has been discontinued in recent years, but surface tilling done since original recordation of the site has probably obscured the artifacts observed by original site recorder and exposed different items which are seen today. ( )
31. References: Cultural Resources Records Search and Survey Report for a Portion of the Cactus Road Site, Otay Mesa Area, San Diego County, California. Richard S. Shepard (Author and Field Director) and Roger D. Mason (Principal Investigator). Prepared for ENV America, Irvine.
32. Name of Project: Cactus Road Site.
33. Type of Investigation: Surface Survey.
34. Site Accession Number: N/A Curated At: N/A
35. Photos: 1 Roll, on file at Chambers Group, Inc., Irvine. ( )
-

## **APPENDIX IV**

### **Appendix D: Paleontological Technical Report**



# San Diego Natural History Museum

Balboa Park • San Diego Society of Natural History • Established 1874

April 5, 2002

Mr. Richard Shepard  
Chambers Group, Inc.  
17671 Cowan Avenue, Suite 100  
Irvine, CA 92614

Dear Mr. Shepard:

A search of the paleontological collections and archives of the San Diego Natural History Museum has not yielded any evidence of any known fossil localities within a mile radius of the Cactus Road Landfill Project, Project No. 8211. The proposed project site is located at the eastern edge of a tributary that is underlain by three rock units. The surface of Otay Mesa at this location is underlain by dominantly coarse conglomerates of Pleistocene age assigned to the Lindavista Formation (Ql) by Kennedy and Tan (1977). As mapped by Kennedy and Tan (1977) underlying a veneer of Pleistocene terrace deposits (probably less than 10 feet thick) is a thin sequence of Pliocene age marine deposits of the San Diego Formation (Tsd). In the tributary, Kennedy and Tan tentatively map deposits of the San Diego Formation, and this appears to represent the eastern margin of deposition of the San Diego Formation in this region of San Diego County on Otay Mesa. Underlying the Pliocene age San Diego Formation is a relatively thick sequence of the late Oligocene age Otay Formation (To) which underlies this region of Otay Mesa on an inclined surface between approximate elevations of 430 to 480 feet. As mapped by Kennedy and Tan, within the project boundaries, the deposits of the San Diego Formation pinch out to the east and deposits mapped as the Pleistocene age Lindavista Formation directly overlies the late Oligocene Otay Formation.

The closest localities to your study area are over one mile to the northeast. These two localities are in the San Diego Formation (localities SDSNH 4457 and 4458) have produced marine invertebrates and some leaf impressions collected from light colored siltstones and sandstones. A map indicating the location of known fossil sites in the vicinity of your study area is included with descriptions and faunal lists of the two above mentioned localities in the San Diego Formation. No fossils have been reported from the Lindavista or Otay formations in close proximity to the proposed project.

The Lindavista Formation does not normally produce much in the way of fossils. Occasionally poorly preserved invertebrates, very rare vertebrates and plant material have been recovered from this unit (Deméré and Walsh, 1993). The Lindavista Formation accumulated on a wave-cut terrace surface as the seas retreated westward in the late



Pleistocene. This unit is considered to be paleontologically sensitive, but well-preserved fossils are very rare.

The San Diego Formation is not known to be very productive in this region of Chula Vista on Otay Mesa. To the west and northwest, a large volume of marine invertebrate and vertebrate fossils with less common terrestrial vertebrates have been collected during paleontological mitigation on various projects in this rock unit. The same situation exists for the Otay Formation. To the north and northwest, the Otay Formation has yielded large, very significant, late Oligocene mammal assemblages, especially in the region of Eastlake.

All three rock units that occur on this project are considered to be of high paleontological sensitivity (Deméré and Walsh, 1993). The Lindavista Formation has a low potential for producing fossils, but the San Diego and Otay formations both have a very high potential for yielding significant fossils in this region. Since this is in the most eastern area of mapped extent of the San Diego Formation in this region, it is possible that if it is encountered during earthmoving activities significant terrestrial vertebrates and plant specimens may be encountered.

Yours truly,

A handwritten signature in dark ink, appearing to read "Hugh M. Wagner", with a long horizontal flourish extending to the right.

Hugh M. Wagner, Ph.D.

Collections Manager, Department of Paleontology

#### References Cited:

Deméré, T. A., and S. L. Walsh, 1993. Paleontological Resources, County of San Diego. Prepared for the Department of Public Works, County of San Diego: 1-68.

Kennedy, M. P. and S. S. Tan, 1977. Geology of National City, Imperial Beach and Otay Mesa Quadrangles, southern San Diego metropolitan area, California. California Division of Mines and Geology; Map Sheet 29.



## LOCALITY #- 4457

SAN DIEGO NATURAL HISTORY MUSEUM  
DEPARTMENT OF PALEONTOLOGY  
LOCALITY CARD

DATE 04/08/02  
TIME 13:20:53

LOCALITY # 4457 LOCALITY NAME Robinhood Ridge #1  
FIELD NUMBER STM27Sep1999-1

LOCATION  
COUNTRY U.S.A.  
STATE CA  
COUNTY San Diego  
CITY San Diego  
LATITUDE 32°34'14"N VARIANCE  
LONGITUDE 117° 0' 7"W  
UTM 11 499817 3604320 VARIANCE

SECT 18 TNSP S DIREC S RANGE 1 DIR W  
MAP NAME Imperial Beach, CA  
MAP SCALE 1:24000 DATUM NAD1927  
MAP SOURCE USGS 1967(1975)

LOCATION IN SECTION unsurveyed

ELEVATION 461 FT

STRATIGRAPHIC POSITION  
GROUP San Diego Formation  
FORMATION  
MEMBER  
INFORMAL NAME  
ERA Cenozoic  
SYSTEM Neogene  
SER/EPOCH late Pliocene  
AGE/STAGE  
NALMA Blancan  
ZONE NAME

LITHOLOGY siltst DEPOSITIONAL ENVIRONMENT marine lagoon, nearshore  
CITATION  
DONATED BY Lennar Communities 10 Sep 1999  
FIELD NOTES  
S.T. Musick, Book#1  
COLLECTOR  
Scott Musick 27 Sep 1999  
COMPILED BY  
S.T. Musick 31 May 2000  
PHOTOS ACCESS NO.  
Y  
ENTERED BY  
H.M. Wagner 6 Jun 2000

## LOCALITY DESCRIPTION

Robinhood Ridge is a residential development project bounded on the east by Otay Valley Road at Chester Grade and on the north by Otay Valley. The project was originally accessed via a dirt road off of Datsun Road. Now the project is accessed by Avenida De Las Vistas, approximately one half to one mile north of Otay Mesa Road, and overlooking the Otay River Valley from the south (the Coors Amphitheater is located to the north). Original exposures of this locality were generated from sheet grading. Remaining exposures can be found in transitioning, north-facing to east-facing cut slopes at the southwest corner of Unit 1, east of Vista Santo Domingo Road and east of Dennerly Canyon.

Fossils were recovered from a greenish-gray, compact, clayey siltstone alternating with several thin layers (1-2 mm thick) of orange and white friable, micaceous, coarse-grained sandstone. The fossil-bearing beds vary in thickness from 6 to 8 inches thick and are moderately compacted. Some of the fossils were stained by orange clay.

The fossil-bearing zone is overlain by a white/tan, very friable, coarse-grained sandstone. The fossil bed is underlain by an orange, very friable, moderate to coarse-grained sandstone. The facies changes are abrupt in both units, without a noticeable change of grain size or grading within each unit. The claystone/siltstone beds strike approximately N30W, and dip 6 degrees south. The San Diego Formation at Robinhood Ridge is approximately 60 feet thick. Locality 4457 was found approximately 30 feet above the Otay Formation/San Diego Formation contact.

Fossils were collected by hand-quarrying.

Fossils recovered from this locality consist of leaf impressions, impressions of clams, and the impression of a crab carapace. Site is still accessible, but will probably be built on.

Elevation: 461' on north to 477' on south.

Collection dates: 27 Sept. 1999 - 20 March 2000; 24, 27 April 2000

LOCALITY: 4457

SAN DIEGO NATURAL HISTORY MUSEUM  
DEPARTMENT OF PALEONTOLOGY  
FAUNAL LIST FOR LOCALITY 4457  
Robinhood Ridge #1

SPECIMEN NUMBER	NUMBER OF ITEMS	DESCRIPTION	SPECIMEN NAME
76210	1	leaf impression?	Incertae sedis
76209	1	mold, nut?	Tracheophyta
76207	1	leaf impression	Dicotyledonae
76208	1	leaf impression, with apparent pathology	Dicotyledonae
76206	2	leaf impressions, part & counterpart	cf. <u>Mimosites</u> sp.
76202	3	leaf impressions	cf. <u>Quercus</u> sp.
76203	3	leaf impressions	cf. <u>Platanus paucidentata</u> Dorf, 1930
76201	19	leaf impressions	<u>Persea coalingensis</u> (Dorf) Axelrod, 1980
76204	5	leaf impressions	cf. <u>Populus</u> sp.
76205	23	leaf impressions	<u>Salix</u> sp.
76213	2	impressions, carapace, whole & partial	<u>Cancer</u> sp. cf. <u>C. antennarius</u> Stimpson, 1856
76211	1	drill hole, impression, on <u>Macoma</u> cast	<u>Polinices</u> sp.
76212	15	steinkerns & molds, valves & pairs	<u>Macoma inquinata</u> (Deshayes, 1855)

# LOCALITY #- 4458

SAN DIEGO NATURAL HISTORY MUSEUM  
DEPARTMENT OF PALEONTOLOGY  
LOCALITY CARD

DATE 04/08/02  
TIME 13:20:54

LOCALITY # LOCALITY NAME  
4458 Robinhood Ridge #2

FIELD NUMBER  
RAC7Sept99-1

## LOCATION

COUNTRY U.S.A.  
STATE CA  
COUNTY San Diego  
CITY San Diego

LATITUDE 32°34'47"N VARIANCE  
LONGITUDE 117° 0'19"W

UTM 11 499506 3604510 VARIANCE

SECT TNSP DIREC RANGE DIR  
29 18 S 1 W

MAP NAME Imperial Beach, CA  
MAP SCALE 1:24000 DATUM NAD1927  
MAP SOURCE USGS 1967(1975)

LOCATION IN SECTION SE1/4

ELEVATION 454 FT

## STRATIGRAPHIC POSITION

GROUP San Diego Formation  
MEMBER  
INFORMAL NAME

ERA Cenozoic  
SYSTEM Neogene  
SER/EPOCH late Pliocene  
AGE/STAGE  
NALMA Blancan  
ZONE NAME

## LITHOLOGY DEPOSITIONAL ENVIRONMENT

sdst nearshore, exposed sandy beach

## CITATION

DONATED BY  
Lennar Communities 7 Sep 1999

## COLLECTOR

R.A. Cerutti, S.T. Musick 7 Sep 1999

## COMPILED BY

R.A. Cerutti 10 Jun 2000

## ENTERED BY

H.M. Wagner 24 Aug 2000

## PHOTOS ACCESS NO.

## LOCALITY DESCRIPTION

Robinhood Ridge is a residential development project bounded on the east by Otay Valley Road at Chester Grade and on the north by Otay Valley. The project was originally accessed via a dirt road off Datsun Road. Now the project is accessed by Avenida De Las Vistas, approximately one half to one mile north of Otay Mesa Road, and overlooking the Otay River Valley from the south (the Coors Amphitheater is located to the north). Locality 4458 was collected on the west side of a haul road cut at the head of the canyon that opens onto the Coors Amphitheater. After grading this locality occurs on the sheet pad south of Vista Santa Catarina.

Fossils were recovered from a two-foot-thick, light brown, fine-grained sandstone.

This locality is stratigraphically equivalent to locality 4457 and was collected northwest of the first locality. The San Diego Formation at Robinhood Ridge is approximately 60 feet thick. Locality 4458 was found approximately 25 feet above the Otay Formation/San Diego Formation contact.

Fossils were collected by hand-quarrying.

Fossils recovered from this locality consist of soft sandstone steinkerns of small clams in a relatively homogeneous sandstone with some small, well-rounded "poway type" cobbles.

The locality has been graded away.

LOCALITY: 4458

SAN DIEGO NATURAL HISTORY MUSEUM  
DEPARTMENT OF PALEONTOLOGY  
FAUNAL LIST FOR LOCALITY 4458  
Robinhood Ridge #2

SPECIMEN NUMBER	NUMBER OF ITEMS	DESCRIPTION	SPECIMEN NAME
76214	1	steinkern, partial	<u>Crepidula</u> sp.
76215	2	steinkerns, partial	<u>Polinices</u> sp.
76216	1	steinkern, partial, valve, right	<u>Clinocardium nuttallii</u> (Conrad, 1837)
76218	1	steinkern, valve, right	<u>Siliqua</u> sp.
76217	8	steinkerns, valves	<u>Tivela stultorum</u> (Mawe, 1823)

**ARCHAEOLOGICAL TESTING OF SITE CA-SDI-11,423  
OTAY MESA, SAN DIEGO COUNTY, CALIFORNIA**

***Submitted to:***

ENV America Incorporated  
16 Technology, Suite 154  
Irvine, CA 92618

***Prepared by:***

EDAW, Inc.  
1420 Kettner Boulevard, Suite 620  
San Diego, CA 92101  
(619) 233-1454

***Author:***

Jackson Underwood, Ph.D., R.P.A.

Project area: 2.2 acres

USGS Quadrangle: Otay Mesa 7.5'

***Restricted Distribution***

August 2002

**Key Words:** CA-SDI-11,423, low-density lithic scatter, CARIDAP, test excavation, Otay Mesa

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## MANAGEMENT SUMMARY

This report documents the results of archaeological testing and evaluation of site CA-SDI-11,423, a low-density scatter of prehistoric artifacts on Otay Mesa, San Diego County, California. The work was conducted in partial fulfillment of the mitigation measures recommended in a Removal Action Workplan being carried out by ENV America Incorporated (the Project Manager) who contracted with EDAW, Inc. for the archaeological work. The project is under California Environmental Quality Act review by both the City and the County of San Diego. This present effort was designed to determine if site CA-SDI-11,423 is a significant resource.

Otay Mesa contains numerous prehistoric cultural sites, consisting mainly of large, low-density lithic scatters that reflect the reduction of local cobbles for toolstone. The development of an archaeological context for the testing on Otay Mesa is facilitated by a management plan for prehistoric resources (Gallegos et al. 1998). The current program of testing and evaluation follows the recommendations and guidelines of the Otay Mesa management plan. Since site CA-SDI-11,423 was recorded as a low-density lithic scatter, it qualified for treatment under the California Archaeological Resource Identification and Data Acquisition Program: Sparse Lithic Scatters (Jackson et al. 1988).

The testing program took place on June 5, 2002, with a crew of four archaeologists. It consisted of 10 shovel test pits, each measuring approximately 50 x 50 cm square. EDAW's investigations confirmed previous findings that the site is a low-density lithic scatter with no subsurface component. Two subsurface flakes were recovered. The results of this testing program indicate that site CA-SDI-11,423 lacks the potential to make meaningful contributions to regional research. It is determined that the site is not eligible to the California Register of Historical Resources. No further cultural resource work is recommended.



# **CHAPTER 1**

## **INTRODUCTION**

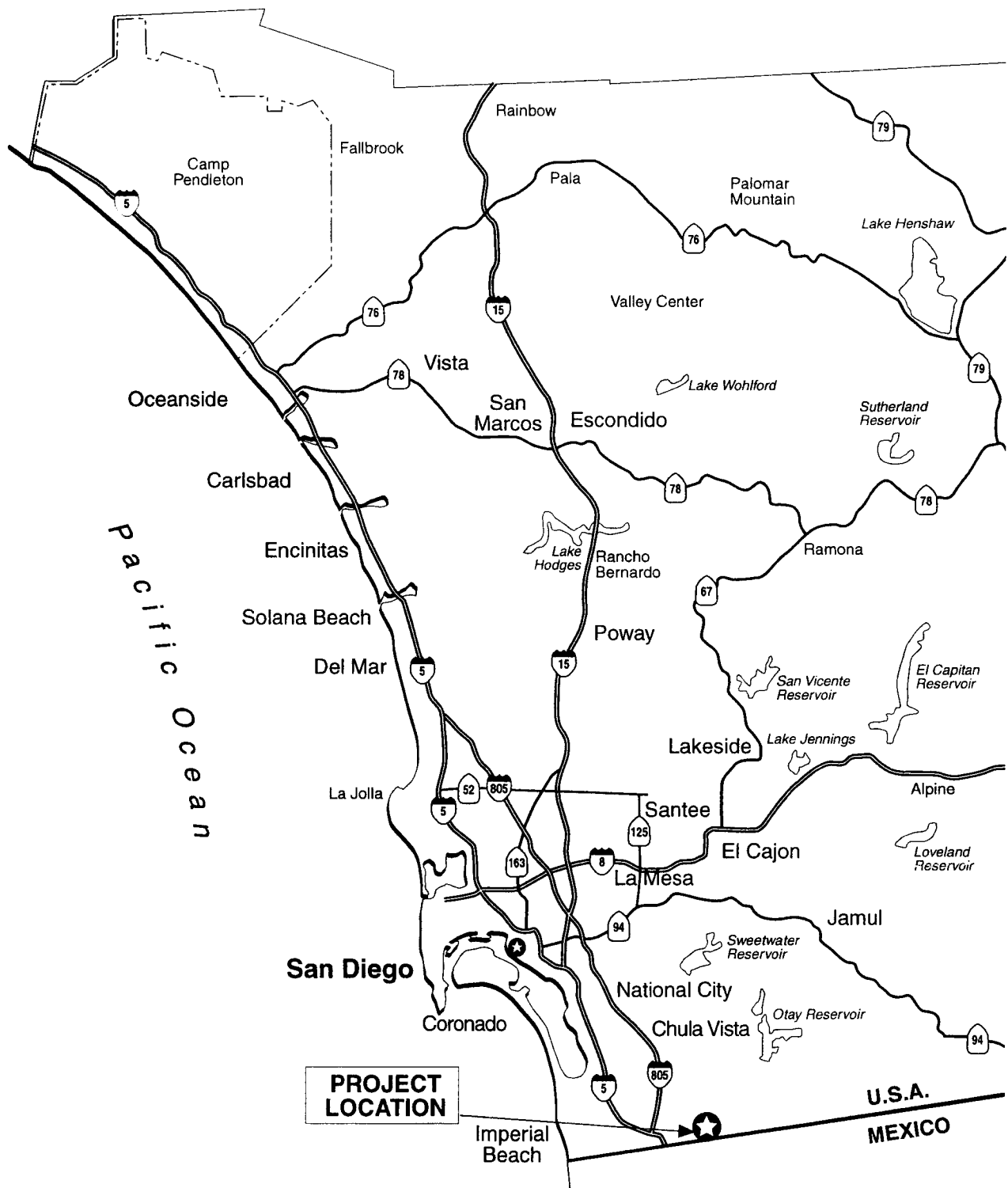
The purpose of this testing program is to evaluate the significance of site CA-SDI-11,423, a low-density lithic scatter located on Otay Mesa in the extreme southwestern portion of San Diego County, California (Figure 1). It is about 9 miles east of the Pacific Ocean (i.e., Imperial Beach); 0.3 miles south of Brown Field, a popular general aviation airstrip; and 1.2 miles north of the Mexican border (Figure 2).

### **PROJECT DESCRIPTION**

A 4.1-acre area on the northeastern portion of the subject property was used as a landfill between 1968 and 1977. The landfill site has been the subject of litigation since 1991 and the matter is now being overseen by a coordinating committee appointed by the United States District Court. A low-density lithic scatter, site CA-SDI-11,423, was recorded on the parcel in 1989. It was visited again in 1999 and site records were updated. The cultural resources testing and evaluation project reported here was part of the mitigation measures recommended in the Removal Action Workplan being carried out by ENV America Incorporated, who contracted with EDAW, Inc. for the archaeological work. The project is under California Environmental Quality Act (CEQA) review by both the City and the County of San Diego. This cultural resources research was designed to determine if site CA-SDI-11,423 is a significant resource. Under CEQA, archaeological sites qualify for significance in terms of eligibility to the California Register of Historical Resources (discussed below).

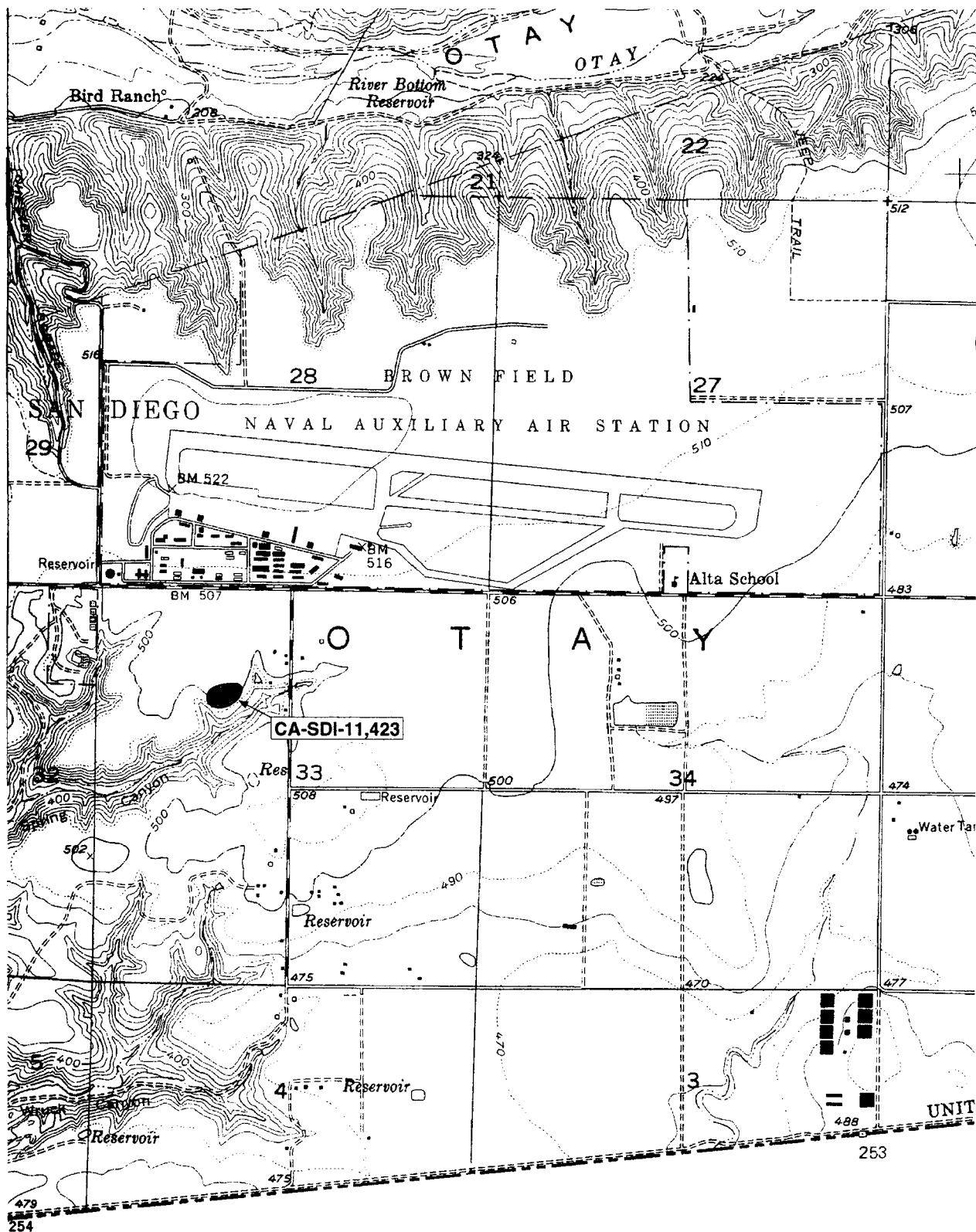
### **PROJECT PERSONNEL**

Andrew York , R.P.A. served as project manager. Jackson Underwood, Ph.D., R.P.A. supervised the fieldwork and prepared the report. Field archaeologists included Brendan Fitzsimons, Collin Tuthill, and Christopher Scroop. Lab work was conducted by Collin Tuthill under the guidance of Cheryl Bowden-Renna. Graphics were created by Dan Brady. Geographic Information System (GIS) support was provided by Alys Wall and Paul Moreno. Marisa Fabrigas performed text processing. Technical editing was done by Therese Tempereau. Resumes of key individuals are provided in Appendix A.



No Scale

**Figure 1**  
**Regional Map**



Source: U.S.G.S. Otay Mesa Quad 1955 -- Contour Interval 20 Feet



0 2000 Feet



**Figure 2**  
**Site Location**



## CHAPTER 2

### SETTING AND BACKGROUND

Over the last decade or so, considerable cultural resources research has been conducted on Otay Mesa (e.g., Carrico and Eckhardt 1998; Cooley et al. 1996; Cook 1989a; Robbins-Wade 1990; Underwood 2002; Underwood and Cleland 2000). The nearly ubiquitous low-density lithic scatters that cover Otay Mesa have created a number of resource management problems (Cook 1989a), and a management plan was prepared in 1998 to deal with the confusion (Gallegos et al. 1998). The management plan also provides an in-depth discussion of the Otay Mesa environment and relevant regional research issues. A brief review of this material will be provided here; however, the interested reader is referred to the management plan for a more detailed treatment.

#### ENVIRONMENTAL SETTING

Site CA-SDI-11,423 is located on Otay Mesa in the southwestern portion of San Diego County, California. Otay Mesa is a large, uplifted Pleistocene marine terrace. It is largely composed of sedimentary rocks of the Linda Vista Formation (Jenkins 1962; Pryde 1992), a geological unit that contains a high frequency of cobble clasts many of which are fine-grained metavolcanics favored by prehistoric populations for use in the manufacture of flaked stone implements. Soils in the project area are clays and clay loams. Otay Mesa soil surfaces are quite stable geologically, with little deposition during the Holocene.

Otay Mesa is drained by two east/west trending rivers, Otay River in the north and the Tijuana River in the south. Site CA-SDI-11,423 is on the northwest bank of upper Spring Canyon, a northeastern trending side canyon of the Tijuana River. The Tijuana and Otay rivers, and their side canyons, including Spring Canyon, are deeply incised into the coastal marine mesa. Site CA-SDI-11,423 has an altitude of approximately 500 feet.

The project vicinity is heavily disturbed by agriculture and construction. Prior to modern disturbance, native vegetation on-site would have consisted of coastal sage scrub (Mooney 1988; Munz and Keck 1959). Native plants observed in the vicinity, primarily on the edges of Spring Canyon, include coastal sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), chamise (*Adenostoma fasciculatum*), and bunchgrass (*Stipa* sp.).

As a general rule, the coastal sage scrub plant community was not particularly rich in the kinds of resources exploited by prehistoric groups. However, the Tijuana River Valley immediately to the south of the project area would have supported a much richer and more diverse community of riparian plants and animals of use to human occupants.

Common terrestrial fauna associated with coastal sage scrub on Otay Mesa would have included the California quail (*Callipepla californica*), mourning dove (*Zenaida macroura*), pocket gopher (*Thomomys bottae*), California ground squirrel (*Spermophilus beecheyi*), woodrat (*Neotoma*



*fuscipes*), various mice (*Perognathus* spp.), coyote (*Canis latrans*), jackrabbit (*Lepus californicus*), cottontail rabbit (*Sylvilagus audubonii*), brush rabbit (*Sylvilagus backmani*), and mule deer (*Odocoileus hemionus*). Small game was an important food resource to prehistoric inhabitants of the region; big game made a less important contribution to the diet (Spier 1923).

## CULTURAL SETTING

### Prehistory

The prehistoric cultural sequence in San Diego County is generally conceived as comprising three basic periods: the Paleoindian, dated between about 10,500 and 8,000 years ago and manifested by the artifacts of the San Dieguito complex; the Archaic, lasting from about 8,000 to 1,500 years ago and manifested by the cobble and core technology of the La Jolla and Pauma complexes; and the Late Prehistoric, lasting from about 1,500 years ago to historic contact and marked by the appearance of ceramics, small arrow points, and cremation burial practices.

#### *Paleoindian Period*

In San Diego County, the Paleoindian period is represented by the San Dieguito Complex, as identified by Rogers (1929, 1939, 1945) and Warren (1966, 1968; Warren et al. 1993). The assemblage is characterized by small, well-flaked domed scrapers; biface chopping and scraping tools; crescentics; elongated bifacial knives; and well-made leaf-shaped points. It is primarily a biface technological tradition, albeit, one lacking the fine flaking of Paleoindian cultural complexes to the east (e.g., Clovis, Folsom, Hell Gap, etc.) (Warren et al. 1993:III-24). The best-dated and most thoroughly investigated San Dieguito component is CA-SDI-149, the C.W. Harris site, located on a terrace overlooking the San Dieguito River in north San Diego County. Here, distinctive San Dieguito materials were found stratigraphically below materials characteristic of the early and late Archaic, and dated to before 9,000 years B.P. According to Warren et al. (1993), the San Dieguito artifacts from the Harris site are "indistinguishable" from those of the Lake Mojave Complex of the Mojave Desert, with the exception of the absence of the distinctive Silver Lake and Lake Mojave stemmed points. Like the Lake Mojave Complex, the San Dieguito Complex is thought to represent an early emphasis on generalized hunting. Aside from the Harris site, however, well-dated San Dieguito assemblages are rare and the relationship between the San Dieguito and the subsequent La Jolla pattern of the Archaic is far from clear. Warren et al. (1993) suggest that the San Dieguito component at the Harris Site dates from 9,030 (+/- 350) to some time between 8,490 (+/- 400) and 7,620 (+/- 380) years ago.

Some flake and cobble assemblages typical of Otay Mesa have been characterized as belonging to the San Dieguito Complex. Cook (1989a), however, argued that few Otay Mesa assemblages show the distinctive technological traits found at the Harris Site. This conclusion seems to be supported by a recent suite of radiocarbon dates from Otay Mesa and vicinity (Gallegos et al. 1998). Site CA-SDI-11,079, yielded a suite of radiocarbon dates that suggests a Paleoindian period time frame. This site had six dates. One additional site on Otay Mesa, CA-SDI-10,452, yielded a single

pre-8,000-year-old radiocarbon date. Twenty-one radiocarbon determinations from Otay Mesa date to the Archaic and only one to the Late Prehistoric (Gallegos et al. 1998:2-31).

### ***Archaic Period***

The economy of the Archaic period (approximately 8,000 B.P. to 1,500 B.P.) is usually conceived as having a more generalized subsistence pattern, possibly the result of environmental changes and population stress, with an emphasis on gathering shellfish, fish, and floral resources. This is indicated by the increased frequency of groundstone implements and the adoption of a mixed cobble/core-based tool assemblage, as well as heavy use of shellfish along the coast. In San Diego County, the Archaic period is represented by the La Jolla Complex, a local manifestation of the widespread Millingstone Horizon. Although major technological change within the Archaic in San Diego County appears limited mainly to the introduction of Elko Series projectile points, there seems to have been some reorientation in settlement to inland settings during the latter portion of this period. This settlement shift appears to have occurred around 4,000 years ago and is thought to relate to the final phases of Holocene sea level rise and resultant siltation of the formerly productive coastal lagoons (Gallegos 1987; Warren et al. 1993). Archaic assemblages in interior northern San Diego County have been defined as the Pauma Complex by True (1958), and this term has been applied to similar assemblages in the south.

The Gallegos et al. overview indicates that most sites on Otay Mesa were utilized during the Archaic period (Gallegos et al. 1998). Of 12 radiocarbon-dated localities on the mesa, 10 fall squarely within the generally accepted age range of the Archaic; as mentioned above, one is earlier and one later. Although formal, temporally diagnostic tools are rare on the mesa, the cobble/core-based lithic assemblage is generally consistent with the La Jolla Complex and the Archaic period dating. It appears that Otay Mesa served primarily as a source of toolstone for Archaic groups that exploited coastal and riparian resources in the Otay and Tijuana river valleys. Terrestrial subsistence resources on the mesa were probably also exploited by these groups.

### ***Late Prehistoric Period***

The Late Prehistoric period shows technological changes, as suggested by the appearance of small projectile points and ceramics. Projectile points commonly found in Late Prehistoric assemblages include Cottonwood Triangular and Desert Side-notched forms, both thought to mark the introduction of bow-and-arrow technology into the region. Ceramics, typically consisting of Tizon Brownware, may have been introduced slightly later than arrow points. These traits, together with the appearance of cremation, are thought to derive from desert areas to the east, either by population movement, diffusion, or a combination of both. The reason for the influx of cultural traits from the east is unclear, but desiccation of Lake Cahuilla in the Imperial Valley has been advanced as a partial explanation (Luomala 1978; May 1983). Most settlement and subsistence data from San Diego County indicate that Late Prehistoric economy was oriented primarily toward terrestrial habitats, as opposed to the more littoral focus of the Archaic (Christenson 1990, 1992).

The Late period seems to be best represented by sites in the Otay and Tijuana river valleys, where habitation sites were located. Exploitation of the mesa top is indicated by occasional small arrow points and ceramic sherds. It appears that the mesa was occasionally utilized primarily by

logistically organized groups operating out of habitation sites located in the river valleys to the north and south of the mesa.

## **Ethnohistory**

By the time Spanish colonists began to settle in Alta California in 1769, the project area was within the territory of the Kumeyaay people, a group of exogamous, nontotemic territorial bands with patrilineal descent (Gifford 1918:167). The Kumeyaay spoke a Yuman language of the Hokan linguistic stock. South of the Kumeyaay, in the vicinity of modern-day Ensenada, are the closely related Paipai. The Kumeyaay neighbors to the north are the Shoshonean-speaking Luiseño (Kroeber 1925). Gallegos et al. (1998) identify three named Kumeyaay villages in the vicinity of Otay Mesa: La Punta near the mouth of the Otay River, *Otai* on the north side of the Otay River valley and *Melejo* near the mouth of the Tijuana River.

The Kumeyaay had a hunting and gathering economy based primarily on various plant resources. For people in the Otay Mesa area, acorns and grass seeds were staple foods, supplemented by various other seeds such as sage (*Salvia* spp), sagebrush (*Artemisia californica*), and lamb's quarters (*Chenopodium album*). Small game was the primary source of protein, but deer were hunted as well. Coastal bands ate a great deal of fish, taking them with lines, nets, and bows. Balsa boats were used (Kroeber 1925; Luomala 1978:599-600). Settlements were moved seasonally to areas where wild foods were in season. For example, inland bands might move into desert areas in the spring to gather agave (*Agave deserti*), then to higher altitude areas in the fall, to gather acorns (Cline 1984). Coastal bands may have lived in more or less permanent villages focused on inshore and littoral resources.

## **History of Project Area**

The history of Otay Mesa has been summarized by Carrico and Ekhardt (1998) and Cooley et al. (1996). For a more detailed discussion, the interested reader is referred to those works. It is important to note, however, that Otay Rancho was the most southerly of the Mexican land grants, granted to Magdalena Estudillo. The Otay Rancho boundary was the Otay River, north of the project area (Robinson 1948); however, the project area was probably grazed during the Spanish and Mexican periods. Otay Mesa continued to be used for grazing and small-scale agriculture until after World War II (Carrico and Ekhardt 1998; Cooley et al. 1996).

Brown Field, just north of the project area, was originally developed as a landing field during World War I and was much improved during World War II, when the runway was paved and most of the existing structures were built. It is now a popular general aviation airfield. Regional population growth increased after World War II. Otay Mesa experienced a transition from primarily agricultural use beginning in the late 20th century, to commercial and light manufacturing (Carrico and Ekhardt 1998; Cooley et al. 1996). The site area itself appears to have been subject to plowing for many years.

## Previous Archaeological Research

Much of Otay Mesa has been surveyed and several reviews of the archaeological research for Otay Mesa have recently been completed (Carrico and Eckhardt 1998; Cooley et al. 1996; Gallegos et al. 1998). In general terms, prehistoric sites on the mesa itself tend to be of two types. The most frequent by far are low-density lithic scatters. Much of this material appears to have resulted from quasi-quarry activities focused on sampling cobbles to see if they would be suitable for making stone tools. There are also small temporary camps scattered over the mesa, particularly at the heads of side canyons of the Otay River or Tijuana River or on the mesa nearby (Gallegos et al. 1998). On the other hand, most major habitation sites or villages tend to be located in the river valleys or near the San Diego Bay.

Site CA-SDI-11,423 was originally recorded by John R. Cook, ASM Affiliates, in 1989 (Cook 1989b). He characterized the site as a low-density lithic scatter consisting of 10 tertiary flakes, nine of black porphyritic andesite and one of green Santiago Peak metavolcanics. He measured the site as 150 m long and 60 m wide. Cook's record of the site was updated by Richard S. Shepard, Chambers Group, in 1999 (Shepard 1999). Shepard suggested the site was some 30 m wider than previously recorded. He noted three large primary flake tools, one large secondary flake tool, and one small primary flake, all of green metavolcanic material (which is probably Santiago Peak metavolcanics). Shepard also noted one multidirectional core of dark material, possibly andesite. The assemblages of Cook (1989b) and Shepard (1999) vary somewhat, but it is to be expected that the visible surface assemblage would change with continued agricultural use of the area and naturally occurring rainfall and sheetwash.

A records search encompassing a one-quarter mile radius around site CA-SDI-11,423 was conducted at the South Coastal Information Center, Department of Anthropology, San Diego State University. The updated list of previously recorded sites within one-quarter mile of the project is provided in Table 1. The records search itself is documented in Appendix D.

**Table 1. Previously Recorded Resources Within One-Quarter Mile of the Project**

<b>Permanent Trinomial (CA-SDI-)</b>	<b>P-Number (P-37-)</b>	<b>San Diego Museum of Man (W-)</b>	<b>Description</b>	<b>Date Recorded</b>
7208	007208	2280	Surface scatter of lithic artifacts	1979; 1987; 1995; 2000; 2001; 2002
10,185			A large temporary camp, scatter of lithic artifacts	1983; 1986
11,423			Low-density lithic scatter	1989; 1999
11,424			Large base camp, with shell and subsurface midden deposits	1989
14,093	014294		Sparse lithic scatter	1995
14,094	014295		Sparse lithic scatter	1995
	014303		(Isolate) a single green, fine-grain metavolcanic flake	1995
	015987		A building, shown at this location on the 1903 30' Cuyamaca USGS quadrangle map	1996; 1998

## **CHAPTER 3**

### **RESEARCH DESIGN**

Generally, evaluating the significance of an archaeological site requires an explicit research design that addresses research issues applicable to the class of resources and the region under study (e.g., Binford 1964; Gallegos et al. 1998; Glassow 1987; California Office of Historic Preservation 1989, 1990; City of San Diego 1999; Raab and Goodyear 1984; Raab and Yatsko 1990; Trigger 1989)

The assessment of the significance of site CA-SDI-11,423 is facilitated by the recent completion of an archaeological resource management plan for Otay Mesa (Gallegos et al. 1998). This document thoroughly reviews the history of research on Otay Mesa, the inherent research difficulties associated with the Otay area, and applicable research issues.

In addition, since the site is a low-density lithic scatter, it qualifies for treatment under the California Archaeological Resource Identification and Data Acquisition Program (CARIDAP) of the California Office of Historic Preservation (Jackson et al. 1988). For the purposes of CARIDAP, a low-density (sparse) lithic scatter must:

1. Contain only flaked stone artifacts (i.e., no groundstone, ceramics, etc.)
2. Lack a substantial subsurface deposit
3. Exhibit surface densities equal to or less than three flaked stone items per square meter (Jackson et al. 1988:1).

Because site CA-SDI-11,423 has a surface density of approximately .015 flakes per m<sup>2</sup> or 1.55 flakes per 100 m<sup>2</sup>, contains only flaked stone materials, and appears to lack a substantial subsurface component, it qualifies as a sparse lithic scatter under CARIDAP.

Site testing and evaluation under CARIDAP may be done on the basis of Subsurface Exploratory Excavation Units (SEEU). These are actually common shovel test pits (STPs) enlarged slightly to 0.5 x 0.5 m or 0.5 m diameter round units. These units should be excavated in no greater than 20 cm levels and screened through quarter-inch mesh or smaller (Jackson et al. 1988:4). The CARIDAP suggests that a site between 5,000 and 10,000 square meters should be tested with a minimum of eight SEEU (Jackson et al. 1988:5). Site CA-SDI-11,423 encompasses approximately 8,830 m<sup>2</sup> so, under CARIDAP, a minimum of eight SEEU would constitute a valid test. The testing program reported here was based on both the Management Plan for Otay Mesa Prehistoric Resources (Gallegos et al. 1998) and the CARIDAP (Jackson et al. 1988).

## **RESEARCH ISSUES**

The Otay Mesa prehistoric resource management plan (Gallegos et al. 1998) identifies regional research questions under five general headings: Chronology, Subsistence and Paleoenvironmental Reconstruction, Settlement Patterns, Trade and Travel, and Technology. Each of these topics is discussed below with reference to site CA-SDI-11,423. In accordance with California Office of Historic Preservation guidelines (1990), specific hypotheses and data requirements are presented.

### **Chronology**

The chronological data compiled for the Otay Mesa management plan suggest that Native American habitation (i.e., residential uses) of the mesa occurred primarily between about 9,000 and 2,000 years ago; this leads the authors to suggest the following hypothesis:

Hypothesis C.1 - "Subsurface prehistoric features on the mesa will date to 2,000 years ago or older" (Gallegos et al. 1998).

Data needs - To address this question a site must contain datable material, such as (1) subsurface features, midden soil, shell, or other material suitable for radiocarbon dating; (2) intact hearth features or subsurface ceramics for thermoluminescence dating; or (3) obsidian samples suitable for taking hydration measurements. The latter may only yield a relative, not absolute date.

A corollary of this hypothesis is that the occasional ceramics and Late period points that have been found on the mesa are the result of resource procurement activities by small work groups or individuals who resided elsewhere, perhaps in a logistically situated base camp/village. This leads to the formulation of the following hypothesis:

Hypothesis C.2 - Ceramics and Late period tools will not be found in close association with evidence of habitation, such as hearths, midden soils, or subsurface features.

Data Needs - The presence of ceramics and/or Late period points in direct association with subsurface features would be necessary to reject this hypothesis.

The ability to date a site is a critical element in determining its significance. In the absence of some basis for establishing temporal control, site CA-SDI-11,423 is unlikely to yield important information.

### **Subsistence and Paleoenvironmental Reconstruction**

Because of the proximity of Otay Mesa to the Tijuana and Otay river estuaries, site assemblages on the mesa were probably influenced by the well-known sequence of early Holocene lagoon formation and middle Holocene lagoon siltation. This appears to be reflected by relatively low density shell deposits at various Otay Mesa sites and by the suite of radiocarbon dates compiled for the

management plan. Based on these data, the following hypotheses can be put forward with regard to site CA-SDI-11,423.

Hypothesis SU.1 - During the Archaic period the primary subsistence focus was the exploitation of estuary subsistence resources. Otay Mesa was utilized as a source of lithic and subsistence resources in support of that primary economic activity. Resource acquisition activities on the mesa in the vicinity of site CA-SDI-11,423 may have been performed by residually mobile groups based in the Tijuana River Valley or at sites such as *Melejo* near the mouth of the Tijuana River. This could have resulted in the utilization of short-term habitation sites on the mesa.

Data needs - To test this hypothesis, a site would first have to be datable to the Archaic period, and second have an artifact/ecofact assemblage that can be related to subsistence activities. As pointed out by the management plan, pollen, phytolith, and protein residue analysis might yield useful information in addressing subsistence and paleoenvironmental reconstructions.

Hypothesis SU.2 - During the Late Prehistoric period, subsistence activities in the vicinity of site CA-SDI-11,423 were conducted on a day-use basis by groups based in the Tijuana River Valley or at sites similar to *Melejo* near the mouth of the Tijuana River. One would expect no evidence of Late period subsistence resource processing at site CA-SDI-11,423.

Data Needs - To refute this hypothesis, a site would have to be datable to the Late Prehistoric period and have evidence of habitation or subsistence resource processing.

## Settlement Patterns

Robbins-Wade (1990) concluded that the few habitation sites and temporary camps on Otay Mesa were generally located near water sources and ecotones. She also suggested that most archaeological sites on the mesa are the remains of resource procurement and processing activities. These are found in a wide array of settings related to the availability of particular resources. Cook (1989a) and Gallegos et al. (1998), however, have argued that most places on the mesa designated as archaeological sites are better considered “background noise” or “smear” resulting from random testing of cobbles and the movement of artifacts from their context by modern plow agriculture. Following this line of reasoning, the Otay Mesa management plan identified three primary types of archaeological manifestations:

- Habitation sites, which typically have a subsurface deposit of at least 100 artifacts per m<sup>3</sup>;
- Temporary camps and artifact scatters, which typically lack a subsurface deposit but have a surface density of at least 3 artifacts per 100 m<sup>2</sup>; and
- Non-sites, which lack a subsurface deposit and exhibit surface densities of less than 3 artifacts per 100 m<sup>2</sup>.



Cook (1989a) and Gallegos et al. (1998) suggest that close investigation of some resources falling within the non-site category might result in their being reclassified into the temporary camp/artifact scatter group. Current information on site CA-SDI-11,423 (Cook 1989b; Shepard 1999) suggests it would be placed in the non-site category of Gallegos et al. (1998) because of the very low density of artifacts (.015 flakes per square meter or 1.55 flakes per 100 square meters).

Hypothesis SP.1 - Upon testing, site CA-SDI-11,423 will turn out to be a non-site, i.e., it will lack a substantial subsurface deposit and will yield surface artifact densities of less than 3 per 100 m<sup>2</sup>.

Data Needs - Low density lithic scatters may be tested utilizing the CARIDAP, which suggests the use of 0.5 x 0.5 m STPs to test for the presence of subsurface materials.

Site CA-SDI-11,423 is not particularly well suited to testing the Robbins-Wade settlement pattern model. While the canyon rim location might qualify as ecotonal, it lacks the assemblage complexity to qualify as a temporary camp. Nonetheless, following Robbins-Wade (1990), resource procurement locations might be expected in a wide variety of settings. If lithic resources were being reduced at site CA-SDI-11,423, there should be technological evidence for the production of flakes, prepared cores, pre-forms, and/or biface blanks. On the other hand, casual, essentially random testing of toolstone quality or quasi-quarry activity might be represented by occasional primary flakes and cobble cores with minimal removals.

Hypothesis SP.2 - At site CA-SDI-11,423 the lithic assemblages will be consistent with casual cobble testing and quasi-quarry activities rather than initial stage reduction of cobbles into pre-forms or blanks for later reduction elsewhere.

Data Needs - A substantial assemblage of flaked stone.

## **Trade and Travel**

The Otay Management Plan suggests that the following items relevant to the investigation of trade and travel practices might be found: obsidian, exotic types of chert, steatite, marine shell, and shell beads. It could be hypothesized that Archaic period resource procurement territories were generally more extensive than in the Late period due to lower population densities. Furthermore, it would be reasonable to suggest that seasonal residential rounds were organized to incorporate inland as well as coastal resources. Based on these assumptions the following hypotheses can be put forward.

Hypothesis TT.1 - Otay Mesa temporary camps, being primarily Archaic, will reflect an East-West resource procurement axis.

Data Needs - Non-local materials found in contexts assignable to the Archaic period.

Hypothesis TT.2 - Otay Mesa lithic scatter sites were utilized by logistically organized work parties resident at base camps that are outside the current project area. As such, lithic scatters will reflect local materials only.

Data Needs - A substantial assemblage of flaked stone artifacts.

## **Technology**

Site CA-SDI-11,423 is unlikely to contain information for any type of prehistoric technology other than the flaked stone industry. Schroth and Flenniken (1997) identified two primary flaked stone technologies on Otay Mesa: the core/cobble industry and the block biface core industry. Most Archaic habitation site assemblages on the mesa yielded high frequencies of core/cobble tools, cores, and unpatterned flake tools, along with low frequencies of patterned flake tools and bifaces. By comparison, a Late Prehistoric habitation site in nearby Otay Valley produced a high frequency of bifaces and lower frequencies of core/cobble tools and cores.

Hypothesis TE.1 - Site CA-SDI-11,423 will exhibit characteristics of the Archaic cobble core pattern with cobble tools and informal flake tools.

Hypothesis TE.2 - The assemblage of CA-SDI-11,423 will reflect casual testing of toolstone quality (i.e., an assemblage with a high percentage of cortical or primary flakes and cores with few removals) and/or production of a few cobble/core tools or flake tools. This hypothesis suggests that the site reflects quasi-quarry activities.

Data Needs - An assemblage of debitage, cores, and flaked stone artifacts.



## **CHAPTER 4**

### **FIELD AND ANALYTICAL METHODS**

This section outlines the methods that were used in recording and sampling these resources in the field, and the processing that took place in the lab. As suggested above, the approach follows the recommendations of the Otay Mesa management plan (Gallegos et al. 1998) and the CARIDAP (Jackson et al. 1988)

#### **SURVEY**

The first step in the fieldwork program was a re-survey of the site as previously recorded. The field team lined up with a 2 m interval between archaeologists and made north/south sweeps of the site vicinity. Vegetation cover was very light and constituted no constraint on the study. All surface artifacts were flagged during the close-interval re-survey and the site boundaries were redefined on the basis of results of this close order survey. A temporary datum was established in the southern portion of the site where artifacts were somewhat more concentrated. A grid system was imposed on the area with the temporary datum at the center. A power pole along the north boundary of the site (pole number 89045) was used as a permanent datum for the purpose of reestablishing the grid system at a later date if necessary. North/south and east/west lines were extended from the temporary datum and STP locations were established at 20 m intervals across the site. Based on the field estimation of site density, one STP was dug at the datum, three STPs north of the datum, two each to the east and west, and one to the south.

The site datum, STP locations, and individual artifacts were shot in by means of a submeter Global Positioning System (GPS) instrument (Sokkia Axis 3). An overall site map was prepared to clearly delineate the relative locations of the surface artifacts, the STPs, and the existing dirt roads and natural features of the parcel (Figure 3). This was also done utilizing the submeter GPS. Individual artifacts falling outside of the STP locations were described and measured in the field but were not collected.

#### **EXCAVATIONS**

Subsurface exploration was initiated through the excavation of nine square STPs measuring 0.5 x 0.5 m. These were placed along the major axes of the artifact scatter every 20 m. They were designed to detect the presence or absence of subsurface artifacts. Accordingly, they were excavated to 30 cm, a depth sufficient to demonstrate the presence or absence of a subsurface component on Otay Mesa. Excavated soils were removed in 10 cm contour levels and dry-screened through eighth-inch mesh. Observations about soil type, compaction, and moisture characteristics were recorded for each level on standard EDAW STP forms.

Figure 3 – Figure Not Included

Contains Confidential Information

## **LABORATORY METHODS AND SPECIAL STUDIES**

Upon arrival at the lab, recovered materials were cleaned as appropriate and cataloged. The master catalog includes information on the unit, the level, artifact type, material type, counts, and weights. No prehistoric floral or faunal materials were recovered. A conventional system of archaeological cataloging was used. Each artifact was measured and weighed as appropriate and given a catalog number. A computerized master catalog was created and is included as Appendix C. As mentioned previously, surface materials outside the STP perimeters were described and measured *in situ* but were not collected.

## **CURATION**

Cultural materials recovered as part of this investigation were packed in archival quality storage materials in accordance with the standards of the San Diego Archaeological Center, where recovered materials will be archived. The site record for CA-SDI-11,423 has been updated with the results of the testing program (see Appendix B) and will be submitted to the South Coastal Information Center of the California Historical Resources Inventory System.



## CHAPTER 5

### RESULTS

Site CA-SDI-11,423 is on Otay Mesa situated on the northwestern edge of Spring Canyon, a side canyon on the north side of the Tijuana River Valley (see Figure 3). A dirt road runs along the edge of the site along the cliff, forming the southern site boundary. Another road runs along the northern site boundary. South of the southern dirt road are piles of cobbles. We have noted cobble piles like these at the edges of agricultural fields in various other locations around Otay Mesa. They are the result of removing rocks from fields to facilitate plowing. A single pole power line is adjacent to the dirt road along the north boundary. We used one of the poles, number 89045, as the permanent site datum.

Vegetation on-site consisted primarily of dead tansy mustard (*Brassica negra*), a plant introduced from the Mediterranean. San Diego experienced a very dry year and, as a consequence, we observed very few annuals in the site vicinity. A few small specimens of chamise (*Adenostoma fasciculatum*) were noted in the southern portion of the site. Dead ruderal grasses were present on the parcel as well. As suggested previously, remnants of native coastal sage scrub remain in Spring Canyon, but the site area itself had been used for agriculture for several decades. The presence of eroded furrows suggested the area had been harrowed, possibly as recently as one or two years ago.

Site CA-SDI-11,423 was originally recorded by John R. Cook, owner of ASM Affiliates, in 1989 (Cook 1989b) and updated by Richard S. Shepard, of the Chambers Group in 1999 (Shepard 1999). Shepard suggested the site was some 30 m wider than previously recorded, approximately 150 m (east/west) by 90 m (north/south). Total site area was calculated by Shepard as approximately 9,000 square meters. In the Management Plan for Otay Mesa, Gallegos et al. (1998:3-31) calculated the surface artifact density at .015 items per m<sup>2</sup> or 1.55 items per 100 m<sup>2</sup>. This document suggests that because most of the mesa is covered with a very low-density lithic scatter possessing very limited research potential, a site should be defined as .03 artifacts/m<sup>2</sup>, or at least 12 artifacts within a 400 m<sup>2</sup> area (Gallegos et al. 1998:3-29). According to the management plan, site CA-SDI-11,423 would need twice its current calculated density to actually qualify as a site.

During our intensive reexamination of the site surface during the testing phase, we determined that the site measures approximately 125 x 90 m (roughly 8,830 m<sup>2</sup>). Eleven artifacts were discovered during our close interval resurvey of the site area. Based on this current understanding of the site, it has a density of 0.001 artifacts per square meter. The surface lithic assemblage was mapped, measured, and described *in situ* but was not collected (see Figure 3 and Table 2).



**Table 2. CA-SDI-11,423 Surface Inventory**

<b>Artifact Number</b>	<b>Description and Approximate Size</b>	<b>Material</b>
1	Multidirectional core, 5 x 5 x 5 cm	Green Santiago Peak Metavolcanic
2	Secondary flake, 3 x 2 x .5 cm	Green Santiago Peak Metavolcanic
3	Primary flake, 6 x 6 x 3 cm	Green Santiago Peak Metavolcanic
4	Primary flake, 4 x 3 x 2 cm	Black Porphyritic Andesite
5	Chopper 9 x 5 x 4 cm, working edge has bifacial removals. Numerous mini-step fractures on edge suggest considerable use.	Green Santiago Peak Metavolcanic
6	Secondary flake, 4 x 2 x 1 cm	Brown Porphyritic Andesite
7	Secondary flake, 3 x 2 x 2 cm	Black Porphyritic Andesite
8	Core based on large primary flake, 9 x 5 x 2 cm	Brown Porphyritic Andesite
9	Flake-based, bifacial chopper, 9 x 5 x 2 cm. Sinuous edge. Battering on edge suggests considerable use.	Green Santiago Peak Metavolcanic
10	Interior flake, 6 x 3 x 1 cm	Green Santiago Peak Metavolcanic
11	Multidirectional core, 6 x 6 x 6 cm	Green Santiago Peak Metavolcanic

The surface assemblage consists of three core fragments, two relatively heavy and well-used choppers, three primary flakes, three secondary flakes, and one interior flake. The entire surface assemblage was made of locally abundant metavolcanic lithic material. A total of nine 0.5 x 0.5 m STPs were dug at site CA-SDI-11,423. Table 3 summarizes the results of this work. These STPs were terminated at 30 cm due to the paucity of cultural material.

**Table 3. STP Results, CA-SDI-11,423**

Designation	Total Excavated Depth (cm)	Results	Artifact Depth (cm)
60 N x 0 E	30	Sterile	NA
40 N x 0 E	30	Sterile	NA
20 N x 0 E	30	Sterile	NA
20 S x 0 E	30	Sterile	NA
0 N x 40 E	30	Sterile	NA
0 N x 20 E	30	Sterile	NA
0 N x 0 E	30	Primary Flake, Green SPMV*	0-10
0 N x 20 W	15	Primary Flake, Green SPMV*	0-10
0 N x 20 W	30	Primary Flake, Green SPMV*	0-10
0 N x 40 W	30	Sterile	NA

\* Santiago Peak Metavolcanics

The test excavation indicates that site CA-SDI-11,423 is a surface manifestation. The underlying soils suggest a geologically stable stratum that has been altered by plowing and by the removal of cobbles. The testing effort did not go below the plow zone. Only two prehistoric artifacts were recovered from the STPs. From the STP located at 0 N x 20 W at the 0-10 cm level came a primary flake of Santiago Peak Metavolcanic weighing 55.1 g. It measured 5.8 x 4.2 x 2.2 cm. From the STP located at 0 N x 0 W at the 0-10 cm level, came a primary flake of Santiago Peak Metavolcanic rock weighing 64.1 g. It measured 6.1 x 5.3 x 1.9 cm.

Clear plastic sheeting of the type used in agriculture was recovered in virtually all STPs, attesting to the agricultural use of the area. Some panels of the sheeting were found *in situ* on the site surface near 0 N x 20 W. In addition, a recent fragment of chicken (*Gallus domesticus*) femur was recovered from the STP at 0 N x 0 W at the 10-20 cm level.



## **CHAPTER 6**

### **DISCUSSION AND INTERPRETATION**

This chapter discusses the results of the investigation in terms of the research hypotheses presented in Chapter 3.

#### **HYPOTHESES REGARDING CHRONOLOGY**

The site did not yield any material that would be datable by contemporary methods nor were any time-sensitive artifacts recovered that would permit dating of the site. In the absence of chronological controls, none of the research questions that deal with changing patterns of cultural adaptation can be addressed, nor can the site be placed in the regional cultural sequence with any certainty. The absence of pottery tentatively suggests it may date to the Archaic, and most similar sites on Otay Mesa have been tentatively placed in the Archaic.

#### **HYPOTHESES REGARDING SUBSISTENCE**

The site did not provide data that would be directly useful in the study of subsistence systems. No faunal remains, other than the modern chicken bone, were recovered. However, one cobble-based chopper and one flake-based chopper were recovered. This suggests at least initial processing of faunal resources or processing of plant or wood materials. Hypothesis SU.2 suggested that we would expect no evidence of subsistence resource processing because we posited that the site area was used only on a day-use basis. This scenario would suggest that resources were collected on Otay Mesa but carried home for processing. Even though the site assemblage is quite limited, it provides some evidence that at least rough, initial processing took place on the site prior to carrying collected resources down to settlements in the Tijuana River Valley.

#### **HYPOTHESES REGARDING SETTLEMENT PATTERNS**

The first hypothesis regarding settlement patterns (SP.1) suggested that the assemblages at site CA-SDI-11,423 would be so sparse as to fall below the site threshold developed by the Otay Mesa management plan. EDAW's evaluation program confirms this hypothesis. Intensive examination of surface assemblages yielded a surface density of 0.1 artifacts per 100 m<sup>2</sup>. This is well below the 3.0 density advocated by the management plan for qualification as a site (Gallegos et al. 1998).

Hypothesis SP.2 suggested that the lithic assemblage would be consistent with casual cobble testing and quasi-quarry activities. If one assumes that primary and secondary flakes relate to primary reduction, then primary reduction activities account for 87 percent of the debitage (Table 4). While the presence of cores suggests primary reduction, two of them were multidirectional cores and one was a large flake-based core. They were not cobbles with only a few removals, so their presence

does not suggest the casual sampling of cobbles that working hypothesis SU.2 anticipates. The very low density of lithic artifacts does, however, indicate casual use of the site area for lithic procurement and reduction.

There were piles of cobbles along the dirt road south of the site that appear to have been collected by farmers to facilitate plowing of the field where CA-SDI-11,423 is located. Some cobbles that have casual flake removals might be in these piles. Likewise, lithic tools may have also been collected. The cobble piles south of the site were not carefully examined for the presence of cobble cores or tools. The assemblage of site CA-SDI-11,423 is so limited that it is not possible to infer much about lithic technology or settlement. The lack of any domestic features (e.g., hearths) or a complex assemblage suggests that the site was not a temporary camp. In a tenuous way, this does support the idea that sites on Otay Mesa were utilized by logistically organized work parties who lived elsewhere, presumably in the Tijuana River Valley.

**Table 4. Total Lithic Materials by Type and Reduction Stage**

<b>Type</b>	<b>Number</b>	<b>Related to Primary Reduction</b>	<b>Percent of Debitage</b>
Cores	3	Yes	NA
Primary Flakes	4	Yes	50
Secondary Flakes	3	Yes	37
Interior Flakes	1	No	12
Choppers	2	No	NA

## **HYPOTHESES REGARDING TRADE AND TRAVEL**

The site contained no exotic items, so it lacks the ability to contribute to trade- and travel-related questions. However, this does tentatively support working hypothesis TT.2, which suggested that sites on Otay Mesa were utilized by logistically organized work parties who lived elsewhere, presumably in the Tijuana River Valley. The assemblage of site CA-SDI-11,423 is so limited that it is not possible to contribute to our understanding of how people and goods may have moved across the prehistoric landscape.

## **HYPOTHESES REGARDING TECHNOLOGY**

Primary and secondary flakes comprise roughly 87 percent of the assemblage. Only one interior flake was recovered and no evidence of biface reduction was found. On the other hand, two bifacially flaked choppers were noted. Two major toolstone production strategies were identified for Otay Mesa by Schroth and Flenniken (1997): the Archaic core/cobble industry and Late Prehistoric block biface industry. The choppers and other lithic materials from site CA-SDI-11,423

appear to reflect the Archaic cobble/core industry, but the assemblage is so limited that it is not possible to draw any but the most tentative conclusions.

## CONCLUSION

The relatively large number of cores and the high percentage of primary and secondary flakes suggest that lithic procurement and early stage reduction were taking place at the site. Two of the cores are multidirectional and the other is flake-based, so these materials do not suggest the casual cobble-testing and primary reduction pattern typical of other parts of Otay Mesa. The presence of relatively heavy choppers and the rest of the lithic assemblage is consistent with the Archaic core/cobble industry. The site lacks finished or broken bifacially flaked tools and the overall low density of debitage suggests that final tool production did not occur on-site. The presence of two choppers suggests that some resource processing also took place on-site. This may have involved butchering or wood processing activities.

The site's limited assemblage, consisting exclusively of three cores, two choppers, and eight flakes, does not have the research potential to address the working hypotheses regarding chronology, subsistence, settlement patterns, trade and travel, or technology beyond what has already been done during this testing effort.



## **CHAPTER 7**

### **MANAGEMENT CONSIDERATIONS**

#### **EVALUATION CRITERIA**

Archaeological sites under CEQA are evaluated for significance based on whether they meet criteria for inclusion in the California Register of Historic Resources (Public Resources Code SS5024.1, Title 14 CCR, Section 4850 et seq.). Generally, a resource is considered “historically significant” if it:

- (A) Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- (B) Is associated with the lives of persons important in our past;
- (C) Embodies the distinctive characteristics of a type, period, or method of construction, or that represent the work of an important creative individual, or possesses high artistic values; or
- (D) Has yielded, or may be likely to yield, information important in prehistory or history.

No important events or persons, either historical or based on Native American oral traditions, have been identified that might have been associated with site CA-SDI-11,423, so it fails Criteria A and B. As a simple lithic scatter, the site does not embody any distinctive characteristics of a period or style, nor does it possess high artistic value. Thus it does not qualify under Criterion C. The significance of the site under Criterion D will be discussed more fully below.

#### **INTEGRITY**

For resources to be considered significant, they must also have integrity. For Criterion C, the integrity question asks whether the site has been substantially disturbed by modern activities or natural forces such as erosion, and, if so, can it still make a meaningful contribution to regional research. For example, archaeological sites may be impacted by construction, vandalism, or farming and yet still have relatively intact portions that retain research potential. On the other hand, a large amount of grading or erosion may completely remove the site’s ability to address research questions in any meaningful way. Eligible sites under Criterion D, then, possess both integrity and sufficient data potential to make a contribution to important regional research issues like the ones described in Chapter 3.



Although site CA-SDI-11,423 has been impacted by harrowing and the collection of cobbles over the past several decades, it retains moderate integrity. Harrowing has probably impacted vertical provenience to some degree. Horizontal provenience has probably been disturbed to some degree, but any gross patterning that may have existed prior to plowing is probably reasonably discernable. The artifact assemblage is so limited, however, that such patterning is of little consequence.

## **EVALUATION OF DATA POTENTIAL**

As noted above, the ability of site CA-SDI-11,423 to meet Criterion D can be evaluated in terms of its ability to contribute important information to the research hypotheses outlined in Chapter 3. These working hypotheses were reviewed in Chapter 6. They related to chronology, subsistence, settlement patterns, trade and travel, and technology. Site CA-SDI-11,423 contained no features and no artifact concentrations. The assemblage consisted exclusively of three cores, two choppers, and eight flakes. Based on these results, it is concluded that the site does not have the potential to contribute meaningful research information beyond what has already been done during this testing effort.

## **MANAGEMENT CONSIDERATIONS**

The main research contribution of such low-density lithic scatters might simply be in knowing (1) that the site exists at all, (2) the site location, (3) the kinds of lithic reduction that may have taken place there, and (4) the site's temporal placement. The testing program reported here resulted in this kind of documentation, with the exception of the fourth item. We found no temporally diagnostic artifacts, no carbonaceous material suitable for radiocarbon dating, no hearth features or ceramics for thermoluminescence dating, and no obsidian for hydration dating. Inferring from the geological context, the lack of pottery, and from the dates ascribed to similar sites in the Otay Mesa area, one might reasonably assume that this site dates to the Archaic period. Beyond that, temporal placement is impossible.

In conclusion, it is determined that site CA-SDI-11,423 does not meet any of the four criteria for inclusion on the California Register of Historic Resources. No further cultural resources work is recommended at this site.

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City of San Diego Clean Water Program. Draft on file at KEA Environmental.



## **APPENDIX A RESUMES**





**ANDREW YORK, MA****Senior Associate Archaeologist****SUMMARY**

Specialist in cultural resources management

Twenty years of experience in California and Nevada archaeology

Thorough knowledge of NEPA, CEQA, and Archaeological Resources Protection Act

**EDUCATION**

MA, Cultural Resources Management,  
Sonoma State University, 1983

BA, Anthropology, University of California,  
Santa Barbara, 1979

**AFFILIATIONS**

Society for California Archaeology

Society for American Archaeology

**CERTIFICATION**

Register of Professional Archaeologists (RPA)

**PUBLICATIONS**

*Environmental Imperatives Reconsidered: Demographic Crises in Western North America during the Medieval Climatic Anomaly* (with T. Jones, G.M. Brown, L.M. Raab, J. McVickar, W.G. Spaulding, D.J. Kennett, and P.L. Walker). *Current Anthropology* 40:2.

*The Spanish and Mexican Eras: 1769-1846. Surface Archaeology at Landels-Hill Big Creek Preserve and the Gamboa Point Properties* (edited by T. Jones and M.K. Brown). University of California, Santa Cruz, Environmental Field Program Publication 18 (1989).

Andrew York has nearly 20 years experience in cultural resource management and has directed and reported on numerous archaeological investigations throughout California and Nevada. After receiving his Master's degree from Sonoma State University in 1983, Mr. York worked as an independent consultant on excavations in northern and central California before serving for 10 years as Project Archaeologist at Dames & Moore's San Diego office. Since joining EDAW, Inc. as a Senior Archaeologist in 1996, Mr. York has directed a wide variety of compliance work for state and federal agencies, utilities, and other public and private entities, giving him a thorough familiarity with the NHPA, NEPA, CEQA, the ARPA, and other regulations pertaining to cultural resources. The scopes of these projects have included Phase I record searches, sensitivity studies, small and large-scale surveys, site evaluations, and full data recovery investigations in a wide range of regulatory and geographic settings. In addition, he has complemented this work by publishing results of his research in both regional and international forums; presenting more than a dozen papers at state and national professional conferences; and participating in a number of public outreach efforts relating to cultural resources.

**LAND DEVELOPMENT PROJECTS****Bixby Ranch Towne Center Project, Seal Beach, California****Principal Investigator**

**CLIENT:** City of Seal Beach

Principal investigator for archaeological survey, testing, data recovery, and construction monitoring for a large commercial development.

**Hellman Ranch Specific Plan Area Research Design, Orange County, California****Senior Author**

**CLIENT:** City of Seal Beach

Served as principal author of a research design for the testing of 11 archaeological sites within the Hellman Ranch Specific Plan Area in Seal Beach.

**U.S. Borax Mine Expansion, Kern County, California****Principal Investigator**

**CLIENT:** U.S. Borax

Directed archaeological surveys of 1,800 acres and conducted NRHP evaluation of 50 sites for a proposed mine waste expansion in Boron.

**343 Sansome Project, San Francisco County, California****Crew Chief**

**CLIENT:** Gerald D. Hines Interests

Participated in excavation of 1851 commercial site in San Francisco.

**ANDREW YORK****Oak Tree West, Riverside County, California****Field Director****CLIENT:** Landmark Land Company

Conducted field survey and prepared archaeological sensitivity assessment for 1,000-acre planned community.

**ENERGY AND TRANSMISSION PROJECTS****Northern Power Distribution System Transmission Line,  
MCB Camp Pendleton, San Diego County, California****Principal Investigator****CLIENT:** U.S. Navy, Southwest Division

Directed intensive archaeological survey of 15 miles of transmission corridors.

**Lucerne Valley-to-Big Bear Valley Transmission Line,  
San Bernardino County, California****Project Archaeologist****CLIENT:** Southern California Edison

Directed archaeological studies along transmission line alternatives in the northern San Bernardino Mountains. Conducted test excavations at a large prehistoric site at Cactus Flat.

**Mead-to-Adelanto Archaeological Survey, San Bernardino  
County, California****Principal Investigator****CLIENT:** Los Angeles Department of Water and Power

Directed fieldwork and wrote reports for archaeological surveys and testing along a 202-mile transmission-line route through central and western Mojave Desert. Recorded 115 sites, and conducted NRHP evaluation of 46 sites.

**GTE Fiber-Optics Archaeological Surveys, Riverside County,  
California****Project Archaeologist****CLIENT:** GTE

Directed a survey of fiber-optic cable routes along Bautista Canyon, SR-71, and Black Mountain Trail.

**Kern River Pipeline Project, Nevada and California****Project Archaeologist****CLIENT:** Kern River Gas Transmission Company

Directed data recovery investigations at two sites in Nevada and six sites in California. Senior author of Nevada data recovery report and coauthor of California report.

**ANDREW YORK****Ute 33-kV Transmission-Line Project, San Bernardino County, California****Project Archaeologist****CLIENT:** Southern California Edison

Directed archaeological survey of six miles of transmission-line corridor near Big Bear Lake.

**Ute 33-kV Transmission Project, San Bernardino County, California****Project Archaeologist****CLIENT:** Southern California Edison

Directed survey and evaluation of three miles of transmission corridor near Big Bear Lake.

**Eastern Sierra Hydroelectric Project, Inyo County, California****Project Archaeologist****CLIENT:** Southern California Edison

Directed testing and evaluation of 21 prehistoric and historic sites in the Eastern Sierra Nevada Mountains.

**Lake Britton Emergency Burial Removal, Shasta County, California****Project Archaeologist****CLIENT:** Pacific Gas & Electric Company

Directed removal of eroding human remains from CA-SHA-464 at Lake Britton.

**Contel Fiber-Optics Project, Ridgecrest to Helendale, San Bernardino County, California****Project Archaeologist****CLIENT:** Contel

Directed Class I and III inventory of approximately 50 miles of fiber-optics cable route in the Mojave Desert.

**Hopeless Flat Wetlands Development Project, Shasta County, California****Project Archaeologist****CLIENT:** Pacific Gas & Electric Company

Conducted archaeological testing at a prehistoric site near Lake Britton.

**Bishop Creek Hydroelectric Project, Inyo County, California****Project Archaeologist****CLIENT:** Southern California Edison

Directed testing and evaluation of 15 prehistoric and historic sites in the Bishop Creek drainage near the Owens Valley.

**ANDREW YORK****Cronise Basin Data Recovery Project, San Bernardino County, California****Project Archaeologist****CLIENT:** U.S. Sprint

Directed data recovery excavations and report preparation for three prehistoric sites near East Cronise Lake in the central Mojave Desert.

**U.S. Sprint Fiber-Optics Cable Route, Los Angeles County to Santa Barbara County, California****Project Archaeologist****CLIENT:** U.S. Sprint

Supervised fieldwork and prepared sections of technical report for an archaeological survey of Burbank-to-Santa Barbara fiber-optics cable route.

**California-to-Oregon Transmission Project, Sacramento and Siskiyou Counties, California, and Southern Cascades, Oregon****Crew Chief****CLIENT:** California-Oregon Transmission Company

Supervised fieldwork for survey of portions of a transmission line route in the Sacramento Valley, Southern Cascades, and Modoc Plateau.

**Coso Geothermal Project, Northern Mojave Desert, California****Crew Chief****CLIENT:** Los Angeles Department of Water and Power

Directed fieldwork for survey of 11 linear miles and testing of four archaeological sites in the northern Mojave Desert.

**Sacramento Municipal Utilities District Transmission-Line Study, Sacramento, Placer, El Dorado, and Yolo Counties, California****Project Archaeologist****CLIENT:** Sacramento Municipal Utilities District

Directed fieldwork for survey of 60 miles of a transmission-line corridor in the Sacramento Valley.

**Big Creek Expansion Project, Kern County to Los Angeles County, California****Project Archaeologist****CLIENT:** Southern California Edison

Supervised sample surveys for approximately 400 miles of alternative transmission-line corridors between Bakersfield and Los Angeles, developed sensitivity model, and prepared sections of technical report.

**ANDREW YORK****Big Creek Expansion Project, Western Sierra Nevada and San Joaquin County, California****Project Archaeologist****CLIENT:** Southern California Edison

Supervised sample surveys for several hundred miles of alternative transmission-line corridors in the western Sierra Nevada and San Joaquin Valley; developed sensitivity model and prepared sections of technical report.

**Santa Ynez Unit Evaluation Program, San Diego County, California****Project Archaeologist****CLIENT:** Exxon, U.S.A.

Directed testing, analysis, and report preparation for seven historic and prehistoric sites in Corral Canyon.

**San Ardo Cogeneration Project, Monterey County, California****Project Archaeologist****CLIENT:** Mobil Oil

Supervised fieldwork and prepared technical report for an intensive survey of a transmission line in the Salinas Valley.

**MILITARY PROJECTS****Archaeological Site Evaluation, Target PB-6 Area, Edwards Air Force Base, California****Principal Investigator****CLIENT:** Dean-Ryan Consultants & Designers, Inc., Sacramento

Principal Investigator for archaeological testing and National Register evaluation of seven prehistoric sites and two historic sites.

**Cultural Resource Testing and Evaluation for Management Region 5, Edwards Air Force Base, California****Principal Investigator****CLIENT:** Dean-Ryan Consultants & Designers, Inc., Sacramento

Principal Investigator for archaeological testing and National Register evaluation of 11 prehistoric sites.

**Bridge/Levee Construction Project, Camp Pendleton, California****Principal Investigator****CLIENT:** U.S. Navy, Southwest Division

Co-principal investigator for extensive data recovery at CA-SDI-10,156/12,599/H, site of the Santa Margarita Ranch Complex and ethnohistoric Luiseño Village of Topomai.

**ANDREW YORK****MCAS El Toro Base Realignment, Orange County, California****Project Archaeologist****CLIENT:** U.S. Navy, Southwest Division

Co-directed archaeological survey, testing and site relocation/recording on MCAS El Toro.

**San Clemente Island Missile Impact Range Testing, Los Angeles County, California****Project Archaeologist****CLIENT:** U.S. Navy, Southwest Division

Directed archaeological testing at six sites at the Missile Impact Range, San Clemente Island.

**Milcon P-527 Pipeline, Camp Pendleton, San Diego County, California****Principal Investigator****CLIENT:** U.S. Navy, Southwest Division

Directed construction monitoring and data recovery excavations at seven prehistoric sites along the Santa Margarita River on Camp Pendleton.

**Tactical Aircrew Combat Training System Range Upgrade, MCAS Yuma, Yuma County, Arizona****Principal Investigator****CLIENT:** U.S. Navy, Southwest Division

Directed archaeological testing of five prehistoric sites.

**Salton Sea Naval Test Base, Imperial County, California****Project Archaeologist****CLIENT:** U.S. Navy, Southwest Division

Directed archaeological testing at seven sites near Salton Sea.

**Nellis Air Force Base Rock Art Recordation Project, Clark County, Nevada****Principal Investigator****CLIENT:** U.S. Air Force

Directed relocation, recordation, and analysis of 12 rock art sites on Nellis Air Force Base.

**Indian Springs Auxiliary Field Survey, Nellis Air Force Base, Clark County, Nevada****Principal Investigator****CLIENT:** U.S. Air Force

Directed archaeological surveys of 800 acres and NRHP evaluation of 13 sites.

**ANDREW YORK****Area P Cultural Resource Evaluations, Edwards Air Force Base, Kern County, California****Principal Investigator****CLIENT:** U.S. Air Force

Directed National Register of Historic Places evaluation of 13 historic structures, four historic archaeological sites, and three prehistoric sites at Edwards Air Force Base.

**Nellis Air Force Base Main Cantonment Golf Course Expansion, Clark County, Nevada****Principal Investigator****CLIENT:** U.S. Air Force

Directed fieldwork and prepared technical report for Phase II and Phase III investigations at three prehistoric sites on Nellis Air Force Base.

**Range Standardization and Automation Fiber-Optics Cable Project, Vandenberg Air Force, Santa Barbara County, California****Principal Investigator****CLIENT:** Versar, Inc.

Directed archaeological survey and shovel testing at 19 sites along a 17-mile fiber-optic cable route at Vandenberg Air Force Base.

**Installation Restoration Program, Edwards Air Force Base, Kern County, California****Principal Investigator****CLIENT:** U.S. Air Force

Directed inventory of approximately 200 water well locations at historic homesteads on Edwards Air Force Base.

**SLC-3 Archaeological Testing, Vandenberg Air Force Base, Santa Barbara County, California****Principal Investigator****CLIENT:** Versar, Inc.

Directed archaeological test excavations on five prehistoric sites and nine isolate locations on Vandenberg Air Force Base.

**Edwards Air Force Base Archaeological Testing, North Base-to-South Base Transmission Line, Kern County, California****Project Archaeologist****CLIENT:** U.S. Air Force and Southern California Edison

Directed archaeological test excavations on two prehistoric sites on Edwards Air Force Base.



**ANDREW YORK****TRANSPORTATION PROJECTS****Guadalupe Corridor Archaeological Testing, San Jose****Project Archaeologist****CLIENT:** Caltrans

Directed archaeological testing for a proposed freeway alignment along Guadalupe Parkway, San Jose, California. Investigated buried prehistoric and historic archaeological sites, including one of San Jose's China Towns.

**Cole Grade Road Widening Project Archeological Testing Study, San Diego County, California****Principal Investigator****CLIENT:** County of San Diego

Conducted an archaeological testing program for the expansion of a 26-foot-wide, two-lane roadway to be widened to create a 52-foot-wide, four-lane roadway with 3-foot-wide walkways on each side.

**Route 41 Archaeological Survey, San Joaquin County, California****Project Archaeologist****CLIENT:** Caltrans

Directed survey of approximately 28 linear miles in the San Joaquin Valley.

**SR-79 Improvement Project, Olive Avenue to Newport Road, Riverside County, California****Principal Investigator****CLIENT:** Riverside County Transportation Commission

Supervised cultural resource surveys and report preparation for proposed highway improvements.

**Highway 1 Widening Project, Castroville to Santa Cruz County Line, Monterey County, California****Project Archaeologist****CLIENT:** Caltrans

Conducted cultural resource survey along Highway 1 for proposed highway improvements.

**WATER PROJECTS****Molycorp Wastewater Pipeline Replacement, San Bernardino County, California****Principal Investigator****CLIENT:** Dames & Moore, Las Vegas

Served as principal investigator for archaeological studies along 15 miles of wastewater pipeline between the Clark Mountains and the bed of Ivanpah Lake, eastern Mojave Desert.

**ANDREW YORK****Pipeline 5 Extension Phase II Project, San Diego County, California****Principal Investigator****CLIENT:** San Diego County Water Authority

Directed fieldwork for archaeological data recovery excavations at site CA-SDI-13,504 for water-conveyance pipeline extension project.

**Lake Hodges Connection Project, San Diego County, California****Project Archaeologist****CLIENT:** City of San Diego

Directed intensive archaeological survey of the immediate shoreline of Lake Hodges in Escondido.

**Metropolitan Water District Westside Conveyance System EIR, Los Angeles and Ventura Counties, California****Project Archaeologist****CLIENT:** Los Angeles Department of Water and Power

Served as task manager for archaeological studies related to corridor selection and EIR for proposed water-conveyance system.

**Kern River Pipeline Project, Kern County, California****Project Archaeologist****CLIENT:** Kern River Pipeline Company

Supervised fieldwork and prepared sections of technical report for an archaeological survey of an approximately 100-mile segment in California.

**Elk Creek and Rogue River Drainage, Douglas and Jackson Counties, Oregon****Project Archaeologist****CLIENT:** U.S. Army Corps of Engineers

Directed archaeological survey of 800 acres.

**Gibraltar Dam Strengthening Project, Santa Barbara County, California****Project Archaeologist****CLIENT:** City of Santa Barbara

Directed fieldwork and prepared technical report for reconnaissance of the proposed inundation area around Gibraltar Reservoir near Santa Barbara.

**Hale Avenue Resource Recovery Facility, San Diego County, California****Principal Investigator****CLIENT:** City of Escondido

Conducted archaeological survey of proposed wastewater treatment facility expansion.

**ANDREW YORK****OTHER RELEVANT PROJECTS****Sierra National Forest Timber Sale, Fresno County, California****Project Archaeologist****CLIENT:** USDA Forest Service

Directed fieldwork and prepared technical report for archaeological inventory of 17,500 acres in the Sierra National Forest.

**Jolla Vieja Canyon Archaeological Survey, Santa Rosa Island, California****Principal Investigator****CLIENT:** National Park Service

Served as principal investigator for survey of 2,300 acres on south Santa Rosa Island for National Park Service. Recorded a total of 45 prehistoric sites.

**Outer Continental Shelf Study, Washington, Oregon, and California****Project Archaeologist****CLIENT:** Minerals Management Service

Prepared summary of Pleistocene and early Holocene culture history and sensitivity study for the California coast between Morro Bay and the Oregon border.

**Development of California State Cultural Resources Plan, California****Research Associate****CLIENT:** California Office of Historic Preservation

As research associate under auspices of Dr. David Fredrickson, prepared summary of State of California planning efforts on national scale through telephone interviews with state historic preservation officers of other states. Attended and prepared documents for meetings for development of California plan.

**Ala-463 Data Recovery, Alameda County, California****Archaeological Technician****CLIENT:** Archaeological Consulting and Research Services

Participated in exposure of 16 burials at Meganos Aspect site near San Francisco Bay in Union City.

**Pit 3, 4, and 5 Test Excavations Near the Pit River, Shasta County, California****Archaeological Technician****CLIENT:** Wirth Environmental Services

Excavated at 17 prehistoric sites.

**ANDREW YORK****Ala-463 Test Excavations, Alameda County, California****Archaeological Technician****CLIENT:** Archaeological Consulting and Research Services

Archaeological testing at Meganos Aspect site in Union City, California.

**SCR-229 Data Recovery, Monterey County, California****Archaeological Technician****CLIENT:** Archaeological Consulting and Research Services

Served as archaeological technician for block excavation of large Middle Period midden site on Monterey Bay in Moss Landing.

**SLO-99 Data Recovery Excavations, San Luis Obispo County, California****Archaeological Technician****CLIENT:** Archeological Consulting and Research Services

Served as archaeological technician for excavation of coastal resource exploitation site in Pismo Beach.

**Mnt-101 Test Excavations, Monterey County, California****Archaeological Technician****CLIENT:** Archaeological Consulting and Research Services

Participated in excavation of prehistoric midden site, and exposed and mapped Spanish Period gun emplacements at the Monterey Presidio.

**SLO-839 Test Excavations, San Luis Obispo County, California****Archaeological Technician****CLIENT:** Robert O. Gibson

Served as archaeological technician for excavations at coastal midden site in Shell Beach.

**Lak-589 Excavations, Lake County, California****Archaeological Technician****CLIENT:** California Department of Parks and Recreation

Served as volunteer participant in excavations of extensive lithic scatter/midden at Anderson Marsh.

**Men-1163 Test Excavations, Mendocino County, California****Archaeological Technician****CLIENT:** Sonoma State University Academic Foundation

Served as archaeological technician for excavation of late prehistoric/early historic habitation site.

**Geysers Public Powerline Project, Lake and Colusa Counties, California****Project Archaeologist****CLIENT:** Sonoma State University Academic Foundation

Conducted archaeological survey of 1,600 acres in the eastern North Coast Range.

**ANDREW YORK**

**University of California, Santa Cruz, Summer Session and  
Environmental Field Program, Monterey County, California  
Teaching Assistant**

**CLIENT:** U.C. Santa Cruz Environmental Field Program

Served as crew chief and teaching assistant for archaeological survey of 4,500 acres of the Landels-Hill Big Creek Preserve on the coast of Big Sur.

**Mnt-391 Data Recovery Excavation, Monterey County,  
California**

**Archaeological Technician**

**CLIENT:** Robert Cartier

Participated in extensive exposure of coastal midden site on Monterey Bay.

**SCr-177 Data Recovery Excavations, Santa Cruz County,  
California**

**Archaeological Technician**

**CLIENT:** Robert Cartier

Served as area supervisor for extensive block excavations of a Paleo-Indian component in Santa Cruz Mountains in Scotts Valley.

**Mnt-387 Data Recovery Excavations, Monterey County,  
California**

**Archaeological Technician**

**CLIENT:** Robert Cartier

Served as archaeological technician for excavations at coastal midden site on Monterey Bay.

**Archaeological Surveys, Sonoma and Solano Counties,  
California**

**Staff Archaeologist**

**CLIENT:** Sonoma State University Academic Foundation

Coordinated and reported six small (up to 600 acres) surveys in Sonoma and Solano Counties.

**Geothermal Public Powerline Project, Northern California**

**Staff Archaeologist**

**CLIENT:** Sonoma State University Academic Foundation

Prepared a detailed regional overview and sensitivity study (including a 1,900-acre sample survey) for a 3,500-square-mile area in the North Coast Range and Sacramento Valley.

**Men-320, 321, 268, and 643 Excavations, Mendocino County,  
California**

**Archaeological Technician**

**CLIENT:** Sonoma State University Academic Foundation

Served as archaeological technician for excavation of four prehistoric sites on the Eel River, near Covelo.

**ANDREW YORK****Lak-510 Data Recovery Excavations, Lake County, California****Archaeological Technician****CLIENT:** Sonoma State University Academic Foundation

Served as archaeological technician for excavation and surface collection of extensive midden/lithic scatter on Cache Creek.

**Son-20 Data Recovery Excavations, Sonoma County, California****Archaeological Technician****CLIENT:** Sonoma State University Academic Foundation

Served as archaeological technician for excavation of Borax Lake Pattern site near Santa Rosa.

**Lak-510 Test Excavations, Lake County, California****Archaeological Technician****CLIENT:** Sonoma State University Academic Foundation

Served as archaeological technician for testing of a large site on Cache Creek.

**Intern, Office of Historic Preservation, California****Intern****CLIENT:** State of California, Office of Historic Preservation

As intern, evaluated archaeological sections of EIRs, and reviewed applications for admission to the NRHP.

**Surveys for Allen-Warner Transmission Line, Southeastern California****Archaeological Technician****CLIENT:** University of California, Riverside, Archaeological Research Unit

As an archaeological technician, participated in sample surveys for the Allen-Warner transmission line through the Mojave Desert. Conducted surveys, mapping, and site recordation.

**Intersite Project, El Peten, Guatemala****Research Assistant****CLIENT:** University of California, Santa Barbara

As research assistant, participated in an archaeological study of the rural component of the Classic Maya. Identified, mapped, and tested several sites along a transect between ceremonial centers of Tikal and Yaxha.

**SELECTED REPORTS**

*Data Recovery at CA-SDI-10,156/12,599/H: Archaeological Investigation in Support of the Bridge/Levee Construction Project, Marine Corps Base, Camp Pendleton, California* (with A. Kirkish). Prepared for U.S. Navy, Southwest Division. KEA Environmental, Inc. (2000).

*Archaeological Monitoring and Testing at Bixby Old Ranch Towne Center, Seal Beach, Orange County, California* (with T. Wahoff and J. Underwood). Prepared for City of Seal Beach, California, KEA Environmental, Inc. (2000)

**ANDREW YORK**

*Archaeological Investigations Along the Lower Santa Margarita River, Marine Corps Base, Camp Pendleton, California* (with C. Dolan, J. Underwood, and T. Wahoff). Prepared for U.S. Navy Southwest Division, San Diego. KEA Environmental, Inc. (1999).

*Cultural Resources Phase I Survey Report for Northern Power Distribution System Transmission Line Project (P046), Marine Corps Base Camp Pendleton, California*. Prepared for U.S. Navy Southwest Division, San Diego. KEA Environmental, Inc. (1999).

*Cultural Resources Investigations for the Lucerne Valley to Big Bear Valley Transmission Line and Substation Project, San Bernardino County, California* (with J.H. Cleland and C. Dolan). Prepared for Southern California Edison, Rosemead. KEA Environmental, Inc. (1998).

*An Archaeological Evaluation of Six Sites near the Missile Impact Range, San Clemente Island, California*. Prepared for U.S. Navy Southwest Division, San Diego. KEA Environmental, Inc. (1997).

*Final Report, Archaeological Testing of Five Sites for the Tactical Aircrew Combat Training System (TACTS) Range Upgrade, Marine Corps Air Station (MCAS) Yuma, Arizona*. Prepared for U.S. Navy Southwest Division, San Diego. KEA Environmental, Inc. (1997).

*Archaeological Investigations at CA-SDI-13,504: A Late Prehistoric Site on the San Dieguito River, San Diego County, California*. Prepared for the San Diego County Water Authority, San Diego. KEA Environmental, Inc. (1997).

*Archaeological Survey of the Indian Springs Auxiliary Field, Nellis Air Force Base, Clark County, Nevada* (with R.E. McMullen, P. deLespinasse, and W.G. Spaulding). Prepared for Nellis Air Force Base. Dames & Moore, San Diego (1995).

*Phase II Archaeological Investigations at Sites 26CK4856, 26CK4864, and 26CK4867 Within the Main Cantonment, Nellis Air Force Base* (with W.G. Spaulding). Prepared for Nellis Air Force Base. Dames & Moore, San Diego (1995).

*Archaeological Evaluations of Prehistoric Cultural Resources at SLC-3, South Vandenberg Air Force Base, Santa Barbara County, California*. Prepared for Versar, Inc., Columbia, Maryland. Dames & Moore, San Diego (1995).

*Class III Cultural Resource Inventory for Los Angeles Department of Water and Power Mead to Adelanto Transmission Line Project: Stateline and Baker Divisions*. Prepared for Los Angeles Department of Water and Power. Dames & Moore, San Diego (1994).

*Class III Cultural Resource Inventory for Los Angeles Department of Water and Power Mead to Adelanto Transmission Line Project: Cronese and Calico Divisions*. Prepared for Los Angeles Department of Water and Power. Dames & Moore, San Diego (1994).

*Class III Cultural Resource Inventory for Los Angeles Department of Water and Power Mead to Adelanto Transmission Line Project: Mt. General, Kramer, and Adelanto Divisions*. Prepared for Los Angeles Department of Water and Power. Dames & Moore, San Diego (1994).

**ANDREW YORK**

*Kern River Gas Transmission Company, Kern River Pipeline Cultural Resource Data Recovery Report, California* (with R. Apple). Prepared for Kern River Gas Transmission Company. Dames & Moore, San Diego (1991).

*Kern River Gas Transmission Company, Kern River Pipeline: Cultural Resource Data Recovery Report, Nevada* (with M.S. Kelly and W.B. Zukosky). Prepared for Kern River Gas Transmission Company. Dames & Moore, San Diego (1991).

*Archaeological Investigations at CA-Ker-2816 and CA-Ker-2817, Edwards Air Force Base, California*. Prepared for the U.S. Air Force and Southern California Edison. Dames & Moore, San Diego (1991).

*Archaeological Survey and Evaluation Along the UTE 33kV Transmission Line, San Bernardino County, California*. Prepared for Southern California Edison Company, Rosemead. Dames & Moore, San Diego (1990).

*Archaeological Evaluation of Site CA-SHA-1861, Located at Hopeless Flat, Shasta County, California*. Prepared for Pacific Gas & Electric Company. Dames & Moore, San Diego (1990).

*An Evaluation of Twenty-One Archaeological Sites on the Lee Vining Creek, Rush Creek, and Lundy Hydroelectric Projects, Mono and Inyo Counties, California*. Prepared for Southern California Edison. Dames & Moore, San Diego (1990).

*An Archaeological Survey of Twenty Timber Sale Areas on the Kings River and Pineridge Ranger Districts, Sierra National Forest, Fresno County, California*. Prepared for Sierra National Forest. Dames & Moore with Mountain Anthropological Research, San Diego (1989).

*An Evaluation of Fifteen Archaeological Sites on the Bishop Creek Hydroelectric Project, Inyo County, California*. Prepared for Southern California Edison. Dames & Moore, San Diego (1988).

*Archaeological Investigations at CA-SBr-6017, 6018, and 128, near East Cronise Lake, San Bernardino County, California* (with M.S. Shackley, M. Lyneis, and L. Christenson). Prepared for U.S. Sprint. Dames & Moore, San Diego (1989).

*BiCEP Transmission Project, Magunden to Vincent/Pardee Alternative Corridor Study* (with C.M. Woods, R. Apple, T. Gonzalez, S. Van Wormer, T. Demere, and J.H. Cleland). Prepared for Southern California Edison. Dames & Moore, San Diego (1987).

*BiCEP Transmission Project, Big Creek to Magunden Archaeology, Ethnography, History, and Paleontology Technical Reports* (with C.M. Woods, R. Apple, S. Van Wormer, E.B. Lander, and J.H. Cleland). Prepared for Southern California Edison. Dames & Moore, San Diego (1987).

*Santa Ynez Unit Archaeological Evaluation Program* (with J.H. Cleland, C.M. Woods, and J.G. Costello). Prepared for Exxon Company, USA. Dames & Moore, San Diego (1986).

**PROFESSIONAL PAPERS**

*Late Holocene Climatic Fluctuations and Implications for Settlement of the Central Mojave Desert*. Presented at the Millennium Conference, Barstow, California (2001).



**ANDREW YORK**

*Late Prehistoric Land Use Along the Lower Santa Margarita River, MCB Camp Pendleton.* Presented at the Annual Meetings of the Society for American Archaeology, New Orleans, Louisiana (2001).

*Prehistoric Land Use Trends along the Santa Margarita River.* Presented at the 34<sup>th</sup> Annual Meeting of the Society for California Archaeology, Riverside (2000).

*Late Holocene Archaeofaunas and Habitat Change along the Lower Santa Margarita River, MCB Camp Pendleton, California.* Presented at the 33<sup>rd</sup> Annual Meeting of the Society for California Archaeology, Sacramento (1999).

*An Early Historic Period Ceremonial Feature on San Clemente Island, California* (with T. Wahoff). Presented at the 32<sup>nd</sup> Annual Meeting of the Society for California Archaeology, San Diego, California (1998).

*Archaeological Investigations for the Lucerne Valley to Big Bear Transmission Line* (with J.H. Cleland). Presented at the 32<sup>nd</sup> Annual Meeting of the Society for California Archaeology, San Diego, California (1998).

*Late Prehistoric Use of the Recessional Shorelines of Lake Cahuilla.* Presented at the 32<sup>nd</sup> Annual Meeting of the Society for California Archaeology, San Diego (1998).

*Late Holocene Environmental and Human Settlement of the Mojave Desert* (with W.G. Spaulding). Presented at the Annual Meetings of the Society for American Archaeology, New Orleans (1996).

*Late Holocene Environment and Culture in the Central Mojave Desert* (with W.G. Spaulding). Presented at the 29th Annual Meeting of the Society for California Archaeology, Eureka (1995).

*Geomorphic and Age Relationships of a Late Paleoindian Site on the North Shore of Pluvial Lake Mojave* (with W.G. Spaulding). Presented at the Great Basin Anthropological Conference, Boise (1993).

*Archaeological Investigations at a Lake Mojave Period Site Near Silver Lake, California* (with R. Apple). Presented at the 26th Annual Meeting of Society for California Archaeology, Pasadena (1992).

*Archaeological Investigation at CA-KER-2816 and -2817, Edwards Air Force Base, California.* Presented at the 26th Annual Meeting of the Society for California Archaeology, Pasadena (1992).

*Archaeological Investigations at Three Sites in the Cronise Basin, San Bernardino County, California.* Presented at the 24th Annual Meeting of the Society for California Archaeology, Foster City, California (1990).

*Research Values and Methodological Problems at the Coso Obsidian Source* (with M. Kelly). Presented at the 22nd Annual Meeting of the Society for California Archaeology, Redding, California (1988).

**JACKSON UNDERWOOD, PH.D.****Project Archaeologist****SUMMARY**

Expertise in cultural resources research, archaeological surveys and excavation, ethnohistoric reviews, and ethnography

**EDUCATION**

PhD, Anthropology, University of California, Los Angeles, 1990

Graduate, Program for Psychocultural Studies and Medical Anthropology, University of California, Los Angeles, 1990

MA, Anthropology, San Diego State University, 1984

BA, Anthropology, San Diego State University, 1979

Field School in Archaeological Excavation, Mt. Taylor, NM, Northern Arizona University, 1978

Field School in Archaeological Survey, San Clemente Island, California, San Diego Mesa College, 1978

**CERTIFICATION**

Register of Professional Archaeologists (RPA)

Dr. Jackson Underwood has 22 years of experience in a broad range of heritage resources work, including prehistoric and historic archaeology, ethnography, and oral history. Dr. Underwood has worked in California, New Mexico, Arizona, Oregon, and Chihuahua (Mexico) for federal, state, and county agencies including the counties of Los Angeles and San Diego, the cities of Los Angeles, Chula Vista, Seal Beach; the Bureau of Land Management; U.S. Forest Service; Caltrans; ACOE; U.S. Air Force; and U.S. Navy. He has also conducted work for a variety of major corporations, such as Kerr-McGee Chemical Company, Peabody Coal Company, the Irvine Company, U.S. Sprint, Standard Oil, Imperial Irrigation District, ARCO, Boeing, San Diego County Water Authority, Semptra Energy, Los Angeles Department of Water and Power, and Pacific Gas & Electric Company.

Dr. Underwood supervised several large historical and oral history projects at Edwards Air Force Base. There, he also conducted a number of archaeological survey, testing, and excavation projects.

Recently, Dr. Underwood compiled major ethnohistoric and ethnographic reviews of the Luiseño as part of the County of San Diego, Gregory Mountain Landfill project; the Quechan Kamia, Cocopa, Cahuilla, Mojave, and Chemehuevi for the Imperial Dunes project; and the Quechan as part of the Glymis Imperial Mine project. His ethnographic experience also includes work in a southern California beach town, the homeless in Los Angeles, and with the Navajo at Black Mesa, Arizona, and the Tarahumara of Chihuahua, Mexico.

A graduate of the Program for Psychocultural Studies and Medical Anthropology at University of California, Los Angeles, Dr. Underwood was with the Department of Psychiatry there for 4 years, conducting ethnographic research in medical and psychological anthropology among the homeless.

**ENERGY AND TRANSMISSION PROJECTS****De Anza Pipeline Cultural Resource Survey****Project Archaeologist**

**CLIENT:** De Anza Pipeline Company, Coral Gables, Florida

Coconducted major portions of large cultural resources survey from Blythe, California, to Mexicali, Baja California Norte. Coauthored technical report.

**North Baja Pipeline Project****Project Archaeologist**

**CLIENT:** Foster Wheeler Environmental Corporation, Santa Ana, California

Coconducted large cultural resources survey, testing and evaluation, and data recovery program for pipeline from Ehrenberg, Arizona, to the Mexican Border west of Andrade, Baja California Norte. Authored and coauthored various technical reports.

**JACKSON UNDERWOOD, PH.D.****Sempra Escondido Power Plant Project****Project Archaeologist****CLIENT:** ENSR International, Camarillo, California

Conducted archaeological survey and coauthored the technical report for a power plant site, Escondido, California.

**All-American Pipeline Cultural Resources Survey****Project Archaeologist****CLIENT:** ENSR International, Camarillo, California

Conducted cultural resources survey for 132-mile segment of petroleum pipeline.

**Archaeological Survey, Moapa Generating Station,  
Clark County, California****Project Archaeologist****CLIENT:** PBS&J

Coconducted survey in south Nevada for a large energy project.

**R Transmission Line Pole Replacement Project,  
Imperial County, California****Project Archaeologist****CLIENT:** Imperial Irrigation District

Performed cultural resources survey and testing.

**Pit River Survey, Shasta County, California****Field Director****CLIENT:** Pacific Gas and Electric Company

Conducted large cultural resources inventory and documented over 95 historic and prehistoric sites.

**Glamis Imperial Project, Imperial County, California****Project Archaeologist****CLIENT:** Glamis Imperial Corporation

Compiled annotated bibliography of archaeological and ethnographic research of Lower Colorado River-Colorado Desert area, wrote regional research overview for Lower Colorado River-Colorado Desert area, directed archaeological survey of the transmission line component, and conducted archaeological survey of the trail systems in the Indian Pass area.

**Oroville, California-to-Eugene, Oregon, Fiber Optics Cable,  
Butte, Tehama, Shasta, Trinity, and Siskiyou Counties,  
California, to Jackson County, Oregon****Project Archaeologist****CLIENT:** U.S. Sprint

Conducted large archaeological survey of northern California portion multistate fiber optics line.

**JACKSON UNDERWOOD, PH.D.****Argus Cogeneration Expansion Project, San Bernardino County, California****Project Archaeologist****CLIENT:** Kerr-McGee Chemical Company

Conducted archaeological survey of plant site and associated utility lines at Trona, Searles Lake, and Panamint Valley.

**San Ardo Cogeneration Project, Monterey County, California****Project Archaeologist****CLIENT:** Mobil Corporation

Conducted archaeological survey for plant site and transmission line.

**San Timoteo Canyon, California-to-Socorro, Texas, Fiber Optic Cable, San Bernardino and Imperial Counties, California****Project Archaeologist****CLIENT:** U.S. Telecom

Conducted large archaeological survey and testing for the southern California segment of multistate fiber-optics line.

**Black Mesa Archaeological Project, Navajo County, Arizona****Field Archaeologist****CLIENT:** Peabody Coal Company

Conducted ethnoarchaeology among the Navajo and historic archaeology at early Navajo sites.

**Black Mesa Archaeological Project, Navajo County, Arizona****Field Archaeologist****CLIENT:** Peabody Coal Company

Excavated recovered archaeological data at Basketmaker II and Basketmaker III sites.

**MILITARY PROJECTS****Cala and Ordnance Storage Project****Project Archaeologist****CLIENT:** U.S. Navy, Southwest Division

Conducted archaeological survey of an expansion of the Marine Corps Air Station, Yuma, Arizona, and authored technical report.

**Seal Beach Fire Station****Project Archaeologist****CLIENT:** U.S. Navy, Southwest Division

Wrote a review of existing cultural resource information and management suggestions for proposed fire station alternatives, Naval Weapons Station, Seal Beach.

**JACKSON UNDERWOOD, PH.D.****Archaeological Testing at Seal Beach Naval Weapons Station****Project Archaeologist****CLIENT:** U.S. Navy, Southwest Division

Conducted archaeological testing at three large Archaic Period sites.

**Archaeological Testing Naval Auxiliary Station, Brown Field, San Diego County, California****Project Archaeologist****CLIENT:** U.S. Navy, Southwest Division

Conducted test excavations at two late-prehistoric sites on Otay Mesa, southern San Diego County, California.

**Archaeological Survey of Proposed Housing Areas 2, 3, and 8, MCAS Miramar****Project Archaeologist****CLIENT:** U.S. Navy, Southwest Division

Conducted survey for three large alternative housing areas at Marine Corps Air Station in central San Diego County.

**Archaeological Testing at San Vicente Reservoir, Emergency Storage Project****Field Director****CLIENT:** San Diego County Water Authority

Conducted testing and evaluation of six Late Prehistoric sites, including milling, rock art, and rock shelter sites.

**MCAS El Toro Base Realignment, Orange County, California****Project Archaeologist****CLIENT:** U.S. Navy, Southwest Division

Codirected archaeological survey, testing, and site relocation/recording on MCAS El Toro.

**Oral History Program, Air Force Test Flight Center, Edwards Air Force Base, Kern and Los Angeles Counties, California****Project Archaeologist and Project Manager****CLIENT:** U.S. Air Force

Supervised a major oral history effort relating to the history of the Edwards Air Force Base area.

**Combat Arms Range, Edwards Air Force Base, Kern and Los Angeles Counties, California****Project Investigator and Project Manager****CLIENT:** U.S. Air Force

Conducted archaeological testing and NRHP evaluation.

**JACKSON UNDERWOOD, PH.D.****Pancho Barnes Ranch Site, Edwards Air Force Base, Kern and Los Angeles Counties, California****Project Investigator and Project Manager****CLIENT:** U.S. Air Force

Conducted historical and archaeological investigations of historic ranch site.

**Major Roads, Air Force Flight Test Center, Edwards Air Force Base, Kern and Los Angeles Counties, California****Project Investigator and Project Manager****CLIENT:** U.S. Air Force

Created the research design for testing and evaluation of the major road system at Edwards Air Force Base.

**Historical Resources Overview, Air Force Flight Test Center, Edwards Air Force Base, Kern and Los Angeles Counties, California****Project Investigator****CLIENT:** U.S. Air Force

Wrote a summary of the history, historical research, and historical resources of Edwards Air Force Base.

**Areas 7P, 7Q, and 7K, Fort Irwin, San Bernardino County, California****Project Investigator****CLIENT:** U.S. Army, Fort Irwin and National Park Service

Conducted archaeological survey of military ranges.

**Force-on-Force Maneuver Range, Fort Irwin, San Bernardino County, California****Project Investigator****CLIENT:** U.S. Army, Fort Irwin, and National Park Service

Conducted archaeological survey of 12-square-kilometer combat range.

**WATER PROJECTS****San Vicente Reservoir Project****Project Archaeologist****CLIENT:** San Diego County Water Authority

Coconducted archaeological testing and evaluation of 14 sites, eastern San Diego County, and coauthored the resulting technical report.

**Biscayne National Park****Ethnographer****CLIENT:** National Park, Homestead, Florida

Conducted ethnographic research relating to the use of the Park and the social impacts of Park Policy.

**JACKSON UNDERWOOD, PH.D.**

**Freeman Junction Survey, Kern County, California**

**Project Archaeologist**

**CLIENT:** Los Angeles Department of Water and Power

Conducted cultural resources inventory of a portion of the 1911 Los Angeles Aqueduct.

**Olivenhain Water Storage Project, San Diego County, California**

**Project Archaeologist**

**CLIENT:** San Diego County Water Authority

Conducted surveys and wrote report to be included in overall project report.

**Central Plant and Pipeline Project, Los Angeles County, California**

**Project Archaeologist**

**CLIENT:** California State University, Long Beach

Performed a series of archaeological survey, testing, and data recovery projects on the campus of California State University, Long Beach, Facilities Management Department. Surveyed and tested the proposed site for a new central plant and pipeline system.

**OTHER PROJECTS**

**Imperial Dunes Project**

**Ethnohistorian and Project Archaeologist**

**CLIENT:** Bureau of Land Management

Wrote ethnographic and ethnohistoric overview for Native American cultural landscape study, conducted archaeological sample survey of the Algodones Dunes, located west of Yuma, Arizona, and east of El Centro, California. Authored archaeological report.

**Otay 12 Project**

**Project Archaeologist**

**CLIENT:** The City of Chula Vista

Conducted archaeological survey and wrote the technical report for a parcel in southern San Diego County.

**Sempra Escondido Research and Technology Center**

**Project Archaeologist**

**CLIENT:** ENSR International, Camarillo, California 2001

Conducted archaeological survey and coauthored the technical report for a business park in northern San Diego County.

**Laguna Mountain Recreation Area**

**Project Archaeologist**

**CLIENT:** US Forest Service, San Diego

Conducted archaeological testing and evaluation in the mountains of eastern San Diego County, and coauthored the technical report.

**JACKSON UNDERWOOD, PH.D.****Boeing Project****Project Archaeologist****CLIENT:** City of Seal Beach

Conducted survey in Seal Beach, California, wrote the technical report, testified at city hearings.

**Hellman Ranch Testing****Co-Project Archaeologist****CLIENT:** City of Seal Beach, California

Conducted test excavation of six Archaic Period sites for proposed large housing development.

**Boeing Project, Orange County, California****Project Archaeologist****CLIENT:** City of Seal Beach

Conducted cultural resources inventory.

**Gregory Landfill Project, San Diego County, California****Ethnographer****CLIENT:** County of San Diego

Conducted ethnohistoric overview of the Luiseño with a focus on the Pala Reservation.

**Bixby Ranch Project, Orange County, California****Project Archaeologist****CLIENT:** City of Seal Beach

Performed cultural resources survey and testing.

**Archaeology, Human Remains, and Repatriation, Los Angeles County, California****Ethnographer****CLIENT:** Gabrielino/Tongva Tribal Council

Assisted Gabrielino/Tongva Tribal Council, in Los Angeles, on cultural resource issues.

**Adaptation of the Homeless Mentally Ill, Los Angeles County, California****Ethnographer****CLIENT:** University of California, Los Angeles

Served as ethnographer for longitudinal study, in Los Angeles, of homelessness.

**PUBLICATIONS**

Cultural Resources Survey for the Otay Ranch Freeway Commercial Project, San Diego. Document on file with the City of Chula Vista (2002).



**JACKSON UNDERWOOD, PH.D.**

The Archaeology of Palo Verde Point. Paper presented at the Annual Meeting of the Society for California Archaeology, San Diego, California (2002).

Work Plan for Archaeological Survey for the Cala and Ordnance Storage Project, Marine Corps Air Station, Yuma. Document on file with Southwest Division, Naval Facilities Engineering Command, San Diego (2002).

Archaeological Survey for the Cala and Ordnance Storage Project, Marine Corps Air Station, Yuma. Document on file with Southwest Division, Naval Facilities Engineering Command, San Diego (2002).

Work Plan for Presence/Absence Archaeological Testing of a Portion of Site CA-ORA-322/1118, Naval Weapons Station, Seal Beach, California. Document on file with Southwest Division, Naval Facilities Engineering Command, San Diego (2002).

Evaluation of Fourteen Cultural Resources at San Vicente Reservoir, San Diego County Water Authority Emergency Storage Project (with Lorraine M. Willey and Christy Dolan). Document on file with the San Diego County Water Authority (2002).

Archaeological Survey of Twenty-four Extra Temporary Work Spaces. Addendum 11, Cultural Resources Overview and Survey for the North Baja Gas Pipeline Project. Document on file with the Bureau of Land Management, El Centro (2002).

Archaeological Survey of Two Access Roads and Thirteen Temporary Extra Work Spaces Addendum 12, Cultural Resources Overview and Survey for the North Baja Gas Pipeline Project. Document on file with the Bureau of Land Management, El Centro (2002).

CA-SDI-12,209: A Large Pictograph and Habitation Site in Escondido, San Diego County, California. Paper presented at the San Diego Museum of Man Rock Art Symposium (2001).

Research Design for the Evaluation of Seven Potential Prehistoric Sites, Boeing Property, Seal Beach, California. Document on file with the City of Seal Beach (with James Cleland and Andrew York) (2001).

A Posited Patayan Travel Route Between Pilot Knob and Buttercup Pass. Paper presented at the Millennium Conference, Sponsored by California State University, San Bernardino and the Bureau of Land Management, held in Barstow, California (2001).

Ongoing Research at Palo Verde Point, Imperial County, California. Paper presented at the Pecos Conference, Flagstaff, Arizona (2001).

Data Recovery Plan for Site CA-SDI-10,307, Torrey Highlands/Village Center. Document on file with the City of San Diego (2001).

Cultural Resources Survey of Ancillary Facilities. Addendum 1, Cultural Resources Overview and Survey for the North Baja Gas Pipeline Project. Document on file with the Bureau of Land Management, El Centro (2001).

Cultural Resources Survey of the Cibola Reroute. Addendum 5, Cultural Resources Overview and Survey for the North Baja Gas Pipeline Project. Document on file with the Bureau of Land Management, El Centro (with Rebecca M. Apple) (2001).

**JACKSON UNDERWOOD, PH.D.**

Archaeological Survey of the Eastside Alternative and Reroutes. Addendum 7, Cultural Resources Overview and Survey for the North Baja Gas Pipeline Project. Document on file with the Bureau of Land Management, El Centro (with Tanya Wahoff) (2001).

Archaeological Survey of the Access Roads for the Cibola Reroute and the Eastside Alternative and an Additional Reroute for the Cibola Area. Addendum 10, Cultural Resources Overview and Survey for the North Baja Gas Pipeline Project. Document on file with the Bureau of Land Management, El Centro (with Rebecca M. Apple) (2001).

Archaeological Survey of Western Portion of the Boeing facility, Seal Beach, Orange County, California. Document on file with the City of Seal Beach (2000).

Supplemental Cultural Resources Survey, Emergency Storage Project, Olivenhain Reservoir and Olivenhain to Second Aqueduct Pipeline, San Diego County, California (with T. Wahoff). Document on file at the San Diego Water Authority and EDAW, Inc., San Diego, California (2001).

Cultural Resources Survey of Line 904, All American Pipeline Conversion Project from Mettler, Kern County, California, to Daggett, San Bernardino County, California (with J. H. Cleland). Document on file with EDAW, Inc., San Diego (2001).

Addendums to Cultural Resources Survey for the North Baja Gas Pipeline Archaeological Survey of the Cibola Re-Route (with R. McCorkle-Apple). Document on file with Foster-Wheeler, Santa Ana, California, and EDAW, Inc., San Diego (2001).

Overview and Cultural Resources Survey for the De Anza Natural Gas Pipeline (with A. Kirkish, R. McCorkle-Apple, A. York). Document on file with De Anza Pipeline Company, Coral Gables, Florida, and EDAW, Inc., San Diego (2000).

Cultural Resources Overview and Survey for the Proposed Alignment of the North Baja Pipeline (with A. Kirkish and R. McCorkle-Apple). Document on file with Foster-Wheeler, Santa Ana, California, and EDAW, Inc., San Diego (2000).

Cultural Resources Survey for the Sempra-Escondido Project, San Diego County, California. Document on file with California Energy Commission and EDAW, Inc., San Diego, California (2001).

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